University of Alberta

Heart Health Promotion Program Design

by

Jennifer Ann Halenar

A thesis submitted in partial fulfillment of the requirements for the Degree of Masters in Science

Centre for Health Promotion Studies

Edmonton, Alberta

Fall 2000

National Library of Canada

Acquisitions and Bibliographic Services

395 Wellington Street
Ottawa ON K1A 0N4
Canada

Bibliothèque nationale du Canada

Acquisitions et services bibliographiques

395, rue Wellington
Ottawa ON K1A 0N4
Canada

Your file Votre référence

Our file Notre référence

The author has granted a non-exclusive licence allowing the National Library of Canada to reproduce, loan, distribute or sell copies of this thesis in microform, paper or electronic formats.

L'auteur a accordé une licence non exclusive permettant à la Bibliothèque nationale du Canada de reproduire, prêter, distribuer ou vendre des copies de cette thèse sous la forme de microfiche/film, de reproduction sur papier ou sur format électronique.

The author retains ownership of the copyright in this thesis. Neither the thesis nor substantial extracts from it may be printed or otherwise reproduced without the author's permission.

L'auteur conserve la propriété du droit d'auteur qui protège cette thèse. Ni la thèse ni des extraits substantiels de celle-ci ne doivent être imprimés ou autrement reproduits sans son autorisation.

0-612-59810-1

Canada

University of Alberta

Library Release Form

Name of Author: **Jennifer Ann Halenar**

Title of Thesis: **Heart Health Promotion Program Design**

Degree: **Masters in Science**

Year this Degree Granted: **Year 2000**

Permission is hereby granted to the University of Alberta Library to reproduce single copies of this thesis and to lend or sell such copies for private, scholarly, or scientific research purposes only.

The author reserves all other publication and other rights in association with the copyright in the thesis, and except as herein before provided, neither the thesis nor any substantial portion thereof may be printed or otherwise reproduced in any material form whatever without the author's prior written permission.

Jennifer Ann Halenar

Jennifer Ann Halenar
536 Lougheed Court
Edmonton, Alberta, Canada
T6R 2T3

October 2/2000
Date Submitted

University of Alberta

Faculty of Graduate Studies and Research

The undersigned certify that they have read, and recommend to the Faculty of Graduate Studies and Research for acceptance, a thesis entitled **Heart Health Promotion Program Design** submitted by **Jennifer Ann Halenar** in partial fulfillment of the requirements for the degree of **Masters in Science.**

Dr. H. A. Quinney
Thesis Supervisor
Committee Chair

Dr. R. J. Dyck
Committee Member

Dr. R. G. Glassford
Committee Member

September 20/2000
Date Thesis Approved by Committee

Abstract

Cardiovascular disease remains a leading cause of death and disability in North America. Research has delineated the nature of CVD and indicated that the modification of individual risk factors along with the broader components (i.e. policy development, environment, organizational structures, etc.) will decrease the mortality/morbidity rates and subsequently enhance **heart health**. A new direction in health care evolved – **health promotion**. This concept emerged as a comprehensive strategy to countervail CVD within a **community-based** focus. The intent of this thesis was to identify health promotion principles and determine the emphasis and organization of these into a community-based **heart health promotion program design**. The information from an analysis of three past health promotion programs (North Karelia, Pawtucket, and Coalfields) along with the opinions from seven Canadian experts were juxtaposed to incorporate the principles within the four phases of a program including the practical considerations necessary to effect positive changes in cardiovascular health.

Table of Contents

	page
Chapter One: Heart Health	1
Introduction	1
Heart Health and Cardiovascular Disease	2
The Nature of CVD	3
Evidence	3
Table One: Relative Costs of CVD	4
Table Two: Percent of Population with Risk Factors	4
Heart Health Promotion in Community Programs	6
Purpose of Thesis	8
Research Question	9
Thesis Design	9
Definition of Terms	10
Chapter Two: Methods and Procedures	12
Introduction	12
Research question	12
Overview of Methodologies and Procedures	13
Chapter Three: Health Promotion and Health Promotion Principles	17
Introduction	17
Evolution	17
Development	19
Principles of HP	23
Chapter Four: North Karelia	32
Background	32
Target Population	33
Table 3: CVD Incidence of Mortality/Morbidity in Finland as compared to the rest of the World in 1969-71	33
Goal	33
Theory	34
Project Components	34
Assessment/Planning	34
Implementations	36
Interventions	36
Evaluation	39

Results 40
Table 4: Main Program Results at 5-, 10-, and 20-years 40
Discussion of Results 41
Principles of Health Promotion 43
Summary 51
Table 5: Degree of Principle Usage in North Karelia 51
Table 6: North Karelia's Use of Health Promotion Principles 52
Implications 53

Chapter Five: Pawtucket Heart Health Program 54

Background 54
Target Group 54
Goals 55
Hypothesis 55
Theory 55
Illustration 1: Pawtucket Heart Health Program Intervention Cube 57
Project Components 58
Assessment 58
Planning 58
Implementation 58
Interventions 58
Evaluation 61
Risk Factor Results 62
Discussion 63
Principles of Health Promotion 64
Summary 71
Table 7: Degree of Principle Usage in Pawtucket 71
Table 8: Pawtucket's Use of Health Promotion Principles Within Program Phases 72
Implications 72

Chapter Six: Coalfields Healthy Heartbeat Program 73

Background 73
Target Group 74
Goals and Objectives 74
Theories 75
Project Components 76
Assessment 76
Planning 78
Implementation 78
Interventions 78
Evaluation 80
Results 81
Discussion 82

Principles of Health Promotion 83
Table 9: Degree of Principle Usage in Coalfields 90
Table 10: Coalfields' Use of Health Promotion Principles Within Program Phases 91
Implications 91

Chapter Seven: Questionnaire Construction 93

Introduction 93
Methodology 93
Questionnaire Development 94
Pilot Study 95
Summary of suggestions 95
Issues 97
Validity 97
Sample 99
Expert Participation 99
Method of Analysis 100

Chapter Eight: Analysis 102

Part One - Analysis of Health Promotion Principles 102

Introduction 102
Principles 103
Summary 116

Part Two - Organization of Principles Into Program Phases 118

Introduction 118
Assessment 119
Principles 119
Summary 129
Table 11: Summary of Results 129
Planning 131
Principles 131
Summary 143
Table 12: Summary of Results 143
Implementation 146
Principles 146
Summary 156
Table 13: Summary of Results 156
Evaluation 158
Principles 158
Summary 168
Table 14: Summary of Results 168

Conclusion 170
Table 15: Principle Organization – A Summation of Results 170

Part Three - Practical Considerations 172

Introduction 172
Assessment 173
Respondents' Perspective 173
Practical Components of the Historical Programs 176
Comparison with Respondents' Perspective 177
Summary 179
Planning 180
Respondents' Perspective 180
Practical Components of the Historical Programs 182
Comparison with Respondents' Perspective 183
Summary 186
Implementation 187
Respondents' Perspective 187
Practical Components of the Historical Programs 189
Comparison with Respondents' Perspective 193
Summary 194
Evaluation 195
Respondents' perspective 195
Practical Components of the Historical Programs 198
Comparison with Respondents' Perspective 201
Summary 202

Chapter Nine: Discussion 203

Introduction 203
Health Promotion Principles 204
Organization of Principles into Phases and the Practical Considerations 207
Table 16: Principle Organization – A Summation of Results 207
Assessment 208
Planning 210
Implementation 212
Evaluation 214
Summary 216
Conclusions 217
Recommendations 218

References 219

Appendices

A - Unified Model 224

B - Health Promotion Principles 225

C - Sequence of Factors Leading to CVD 226

D - Cover Letter 227

E - Executive Summary 229

F - Questionnaire 233

G - List of Pilot Study Participants 246

H - List of Expert Respondents 247

I - North Karelia, Pawtucket, and Coalfields Principle Use Within Program Phase 248

J - Summary of Results Comparing the Three Past Programs with the Experts' Responses 249

List of Tables

		page
Table 1:	Relative Costs Spent on the Effects Of CVD	4
Table 2:	Percentage of Population with Selected Risk Factors	4
Table 3:	CVD Incidence of Mortality and Morbidity in Finland as Compared to the Rest of the World in 1969-71	33
Table 4:	Main Program Results at 5-, 10-, and 20-years	40
Table 5:	Degree of Principle Usage in North Karelia	51
Table 6:	North Karelia's Use of Health Promotion Principles Within Program Phases	52
Table 7:	Degree of Principle Usage in Pawtucket	71
Table 8:	Pawtucket's Use of Health Promotion Principles Within Program Phases	72
Table 9:	Degree of Principle Usage in Coalfields	90
Table 10:	Coalfields' Use of Health Promotion Principles Within Program Phases	91
Table 11:	Summary of Results: Organization of Principles Into the Assessment Phase - Experts' Responses Compared with the Past Programs	129
Table 12:	Summary of Results: Organization of Principles Into the Planning Phase - Experts' Responses Compared with the Past Programs	143
Table 13:	Summary of Results: Organization of Principles Into the Implementation Phase - Experts' Responses Compared with the Past Programs	156
Table 14:	Summary of Results: Organization of Principles Into the Evaluation Phase - Experts' Responses Compared with the Past Programs	168
Table 15:	Principle Organization – A Summary of Results	170
Table 16:	Principle Organization – A Summary of Results	207

List of Illustrations

Page

Illustration 1: Pawtucket Heart Health Program Intervention Cube 57

Chapter One: Heart Health

Introduction

Cardiovascular disease (CVD) is the leading cause of death and disability in North America. The rising cost of disability, absenteeism, and lost productivity is immense as chronic diseases such as CVD take a commanding lead over other forms of acute causes of death and illness. This deep concern has spurred efforts to solidify the identification of factors contributing to this disease and to determine methods of preventing these factors from having even greater impact. Research indicates that the modification of certain individual aspects of health (i.e. knowledge, attitudes, and behaviors), along with the interaction of these with other components (i.e. the physical, economic, and social environments; education and economic status; support systems; organizational structures; governmental policies, etc.), will substantially decrease the onset, prevalence, and mortality rates of CVD and subsequently enhance cardiovascular health (i.e. heart health). As a consequence of this research, a fascinating new direction in health care has evolved, blossoming into a health promotion challenge. The focus on disease prevention and health promotion was initiated in the 1970's and has provided a foundation upon which current heart health initiatives have been built and which will serve to support future initiatives. The community itself has become the center of focus in hope of instituting widespread changes on different levels (individual, community, policy, and organizational).

The purpose of this thesis is threefold. The first step will be to identify the principles of health promotion that are important in establishing the foundation for a successful heart health program. Second, a comprehensive evaluation will be done on

three past heart health programs, i.e. North Karelia (Finland), Pawtucket (USA), and Coalfields, (Australia). These will be discussed within the realm of the previously delineated health promotion principles. Next, several Canadian expert heart health program planners will be contacted and asked to participate in a survey which will help to determine the soundness of the principles and the fit of these principles within program design. The outcome of this thesis will be the identification of health promotion principles, the subsequent organization of these principles into the design of a community-based heart health program, and consideration of the practical components necessary to effect positive changes in cardiovascular health.

Heart Health and Cardiovascular Disease

In many countries, the rate of CVD is in decline, and the world now has the means and knowledge to prevent heart attack and stroke from reaching epidemic proportions in regions that have not yet been badly affected (Catalonia Declaration, 1995). Canada is one of the countries that has experienced a decline in CVD. Statistical projections indicate that Canada has avoided approximately two million cardiovascular events between 1970 and 1992 (Catalonia Declaration, 1995). The reduction in cardiovascular mortality appears to have been largely attributed to a population-wide decline in the level of risk factors rather than better medical management. However, there is no guarantee that this trend will continue if appropriate measures are not taken to sustain it.

The Nature of Cardiovascular Disease

CVD occurs when fatty deposits build up in the blood vessels (i.e. atherosclerosis) and impede the flow of oxygen and nutrients to the heart. As these deposits accumulate, the vessels get narrower and lose their elasticity, forcing the heart to work harder and reducing the blood flow to the heart muscle. Prolonged heart disease may result in heart attack, stroke, or hypertension. To date, considerable progress has been made in identifying the multiple factors that place individuals at risk for developing CVD.

The hallmark of this disease is its multi-factorial nature. Risk factors are divided into two categories: non-modifiable risk factors, including heredity, age, gender, and compounding illness; and modifiable risk factors including cholesterol levels, levels of physical activity, blood pressure, smoking, weight, stress, nutrition, and social support. These elements are considered modifiable, indicating that through positive individual lifestyle change the risk for heart disease will decrease. It has become clear that individual lifestyles contribute significantly to health and wellbeing (Heart and Stroke, 1995).

Evidence

Between 1986 and 1992, ten provincial heart health surveys were carried out in Canada (Heart and Stroke, 1995). The results were astonishing. In 1990, almost 40 percent of all deaths were attributed to CVD. The following table (Table 1) depicts the impact of CVD in terms of cost to the healthcare system:

Table 1: Relative Costs Spent on the Effects of CVD

COSTS	AMOUNT
Hospital days	8 million days
Physician Visits	18 million visits
Disability Pensions	20 percent of all Disability costs
Health Operating Costs	1 in 5 dollars
Medical Expenditures	10 percent of all Medical costs

The following table (Table 2) shows the rising concern about the potential effects of CVD. The survey indicates that the risk for CVD remains markedly prevalent.

Table 2: Percentage of Population with Selected Risk Factors

RISK FACTORS	PERCENT OF POPULATION WITH SELECTED RISK FACTORS
At least one major risk factor	63
MAJOR RISK FACTORS	
Elevated Blood Cholesterol	43
Regular Smoking	27
High Blood Pressure	15
OTHER RISK FACTORS	
Overweight (Body Mass Index >25)	48
Sedentary lifestyles	37
Diabetes	4
AGE RANGE WITH AT LEAST ONE RISK FACTOR	
18-34 years	48
35-64 years	71
65-74 years	85

Interestingly, by 1995, the percentage of all deaths attributed to CVD decreased to 38 percent (Heart and Stroke, 1995). This reduction may seem small, but the implications are enormous. This reduction in CVD mortality appears to have been largely attributed to a decline in the prevalence of risk factors (Catalonia Declaration, 1995 & Heart & Stroke, 1995). Given the remarkable findings and the advancement of scientific knowledge, there now exists the potential to create a national environment in which many cases of heart disease and stroke could be drastically reduced. The primary challenge now is to maintain this trend while initiating further developments in cardiovascular health.

One strategy found to be successful in the modification of CVD risk factors is **Health Promotion**. This strategy, though, has existed in some form or another for decades. It has now developed into a successful concept that allows for the incorporation of all factors of health and CVD risk factors along with the integration of broad spectrum factors (i.e. economic, political, etc.). The effort to develop the concept of health promotion into a working priority of health care is seen in the use of health promotion principles in various community-based programs (i.e. North Karelia, Pawtucket, and Coalfields). The utilization of health promotion principles is illustrated in community-based programs where a priority is placed on one notable health condition that requires immediate intervention – **heart health**. Further delineation of these health promotion principles will be discussed in chapter three in keeping with the goals of this thesis. The next section will explore how heart health and the use of health promotion come together to battle the issue of cardiovascular disease.

Heart Health Promotion in Community Programs

Health promotion breathes life into risk reduction and lifestyle change as a focus for altering the consequences of chronic diseases such as CVD. The complexity and inter-relatedness of CVD risk factors demands an overall change in individual lifestyle which is supported by policy, environment, and social changes (Elder, Schmid, Dower, & Hedlund, 1993). Heart health programs that reflect the principles of health promotion and which are focussed at the community level will have far-reaching effects (Proceedings of the 1988 Summer School, 1988). The numerous benefits to incorporating a community-based focus will be discussed in this section along with the rationale of reviewing the achievements demonstrated through several community-based heart health programs in the past, i.e. North Karelia (Finland), Pawtucket (USA), and Coalfields (Australia).

First, placing the concept of health promotion into a community context allows for the complete integration of heart health as a definite advancement towards achieving positive well being. Heart health will have a high degree of public acceptance as a positive health issue and therefore help people understand what health promotion means in practical terms (Proceedings, 1988). Activity at the community level will contribute to the public health movement by shifting the emphasis from a clinical treatment focus to community-based health promotion.

Second, people, and their behaviors, are dramatically influenced by their surroundings, thus, individuals and their communities cannot be considered as separate. As well, the complexities and inter-relatedness of CVD augments this fact. A determined and well-conceived intervention can have a major impact on health, wellbeing, and risk factors. A fundamental assumption is that such a development leads to reduced rates of

CVD, increased positive health status of the population, and a favorable health environment (Williams, 1992).

Third, incorporating a community involvement approach has been deemed an effective means of achieving moderate success rates in terms of risk factor and lifestyle changes (Glanz, 1997, Farquhar, 1978, Fincham, 1992, & Williams, 1992). It allowed for active participation on numerous levels that may eventually serve to alter community perspectives on lifestyle changes and behavior change. It encouraged commitment from various sources and therefore contributed to sustainability. Glanz (1997) also identified numerous benefits of the community-based approach. Such an approach was able to affect change in the social milieu of people, to better integrate interventions into the entire community, to ensure longevity of change, and to enable the researchers to create a higher level of comprehensiveness.

What has been done in the past (North Karelia, Pawtucket, and Coalfields) is not only of interest but of great significance to the progress of health promotion. The experience gained from these programs show us how to apply health promotion concepts, principles, and strategies to our community-based heart health programs (Proceedings, 1988).

It is assumed that each project provides insight into their weaknesses and challenges, their recognized priorities, and varying degrees of success. By analyzing each past heart health project and coordinating their positive aspects while providing for ways to counteract the challenges that were confronted, a practical model for the application of health promotion principles can be developed. In this way, the valuable learning gained

from individual projects be brought together to create a versatile, comprehensive program to assist in the enhancement of cardiovascular health.

Purpose of Thesis

The purpose of this thesis was to identify the health promotion principles and determine the placement of the health promotion principles within the phases of a successful heart health promotion program (i.e. Assessment, Planning, Implementation, and Evaluation).

The principles were developed from a systematic analysis of several key documents that contributed to the development of the concept of health promotion. In this manner, the information was compiled to ascertain comprehensiveness and ensure that all dimensions of health promotion were addressed. The arrangement of the principles into the four program phases was done through a combined use of two sources. First, a comprehensive historical evaluation of the experience of past heart health projects of North Karelia (Finland), Pawtucket (United States of America), and Coalfields (Australia) was done. Then, a questionnaire was issued to current Canadian heart health experts regarding their experience and knowledge within the field of health promotion. The intent was to consider the principles individually within the specific phases to ensure that the concept of health promotion was fully incorporated. In doing so, this would bring to the forefront the concept of health promotion and ensure that it not only formed the basis for program design, but was also continuously maintained throughout. Hence, the organization of the principles into the phases would serve as a template outline for future heart health promotion program designers to follow.

Research Question

What are the necessary health promotion principles in a community-based program, which, if applied, could begin to effect positive changes towards cardiovascular health?

Thesis Design

The foundation for this thesis relied on accurate description of the health promotion principles. In order to delineate such principles, a comprehensive analysis was required of the documents underpinning the concept of health promotion. The outcome was nine health promotion principles that would serve as the basis for the description and analysis of the three past programs, analysis in the questionnaire, and ultimate outline for use in heart health promotion program design.

Generally, any program development has four phases. These are ***Assessment, Planning, Implementation,*** and ***Evaluation***. For the purposes of this research, the description of the past projects occurred in terms of the above stated phases. Following this, there was a systematic analysis of each of the past project's use of the delineated health promotion principles.

Next, a questionnaire was created and dispersed to heart health promotion experts of each Canadian province to obtain their perception of the validity of the health promotion principles. As well, their insight into the fit of these within a heart health promotion program based on their experience and understanding of the needs and special considerations of their population was obtained. Upon acquisition of the questionnaires, analysis of the data consisted of three components. First, there was a discussion regarding

the accuracy of the principles. Next, a comparison of the respondents' opinions combined with the results of the review of the three past programs was done to ascertain the fit of the principles into the program phases. Lastly, the practical components of a program were discussed according to the experts and the experience of the past programs.

The outcome of this thesis was the determination of the necessary emphasis of the health promotion principles, the organization of these principles into the development of a community-based heart health promotion program, and the practical components needed within a heart health program that would effect positive changes in cardiovascular health for Canadians.

Definition of Terms

The following is a list of terms and their definitions used throughout this thesis.

Health – can be defined as a state of complete physical, mental,, and social wellbeing. It is the extent to which an individual, or group is able, on the one hand, to realize aspirations and satisfy needs, and, on the other hand, to change or cope with the environment. Health is seen as a resource for everyday life, not the objective for living; it is a positive concept emphasizing social and personal resources, as well as physical capabilities (World Health Organization, 1986). This definition can be viewed as a multi-dimensional phenomenon, with multiple determinants, one that can be defined by its' positive rather than negative aspects (Green & Raeburn, 1988).

Health Promotion –can be defined as the process of enabling people to increase control over, and improve their health. It represents a mediating strategy between people and their environments, synthesizing personal choice and social responsibility in health to create a better future (Labonte, 1992). From an operational standpoint, it can be defined

as the combination of educational, organizational, economic, and environmental supports for action conducive to health (Green & Raeburn, 1988).

Community – generally defined as a group of persons with a shared identity and a sense of collective purpose (Labonte, 1992). It also includes social, cultural, and political interdependence (Elder, et al., 1993).

Cardiovascular Disease (CVD) – diseases effecting the heart and related circulatory system, including coronary artery disease and hypertension, that may lead to heart attack or stroke resulting in permanent disability or death (Heart and Stroke Foundation, 1995). This may also be referred to as ***heart disease***.

Atherosclerosis – the build up or accumulation of fatty deposits within the coronary arteries impeding the flow of oxygen and nutrients to the heart that may result in heart attack (heart & Strohe, 1995).

Heart health – a positive concept referring to the process and outcome of enhanced health through actions directed at reducing the risk to CVD which in turn, effect other aspects of life.

Empowerment – a process of helping people to assert control over the factors which affect their health and to enhance people's belief in their ability to change their own lives (Airhihenbuwa, 1994). This is accomplished by providing access to information, supporting community leadership in decision-making practice, and assisting in overcoming obstacles (Robertson & Minkler, 1994).

Chapter Two: Methods and Procedures

Introduction

This chapter sets out the methods and procedures followed throughout this thesis. The research question was intended to discover two types of information: the accuracy of the identified health promotion principles and the fit of these principles in the design of a heart health promotion program (assessment, planning, implementation, and evaluation phases). To answer this question, there were three identified steps. The first step was a delineation of the health promotion principles. Second, these principles were used as a basis for the analysis of three past heart health programs. Next, a questionnaire was developed to obtain current expert opinion as to the accuracy of the health promotion principles and the emphasis of these into a heart health promotion program. The information collected would then be analyzed based on the experts' assertions and comparisons made with the historical experience of the past programs. The outcome was a general model for future health care professionals to follow when designing a heart health promotion program in the battle against cardiovascular disease.

Research Question

The fundamental question which this study was designed to answer is as follows:

What are the necessary health promotion principles in a successful community-based heart health promotion program which, if applied, could begin to effect positive changes towards cardiovascular health in Canada?

Overview of Methodologies and Procedures

The following represents, in a step-wise sequence, the methods and the procedures followed in the research process.

1. **Identification of health promotion principles which resulted from review of major national documents – Ottawa Charter, the Framework, and an Action Statement for Health Promotion.**

Although these three documents were found to be invaluable, it should be recognized that many other sources were also reviewed in the identification of the health promotion principles. This included examining the historical development of the concept of health promotion, reviewing the outcomes from other community-based health promotion programs, and exploring numerous papers, articles, and texts that deemed to further clarify the concept of health promotion. An examination of these key sources enabled the identification, description, and rationale of nine strategic health promotion principles.

2. **Identification of three widely recognized successful heart health programs – North Karelia (Finland), Pawtucket (United States of America), and Coalfields (Australia).**

There are many valuable community-based heart health promotion programs that have been conducted with varying degrees of emphasis on health promotion. However, it was most practical and beneficial to choose these three particular trials due to the variety in population groups, varying emphasis of the risk factors of cardiovascular disease, and the evaluation that has been done. Together, these programs have contributed to future development of heart health programs.

North Karelia was chosen because it was the first of its kind to incorporate more that one risk factor, utilize theories that went beyond changing individual behaviors, operate within a population, and had the longest follow-up evaluation. Pawtucket was chosen because it involved an interesting perspective through the use of volunteers while emphasizing modifying risk factors at multi-levels. Coalfields was chosen because Australia has been a world leader in creating health as a priority at governmental levels. Together, these programs would offer a multitude of information regarding their challenges, strengths, weaknesses, and outcomes. This information can then be tied together to create a versatile, comprehensive program to enhance heart health.

3. **Analysis of the three heart health promotion programs in terms of the assessment, planning, implementation, and evaluation phases.**

Generally, any program development has four phases – assessment, planning, implementation, and evaluation. For the purposes of this research, the description of the past projects occurred in these phases. Initially, though, background information was presented in order to provide additional understand towards the underlying perspectives and how this effected the manner in which the programs evolved, designed, and implemented.

4. **Analysis of the identified heart health programs in terms of the health promotion principles.**

The previously identified health promotion principles were used as a basis for the analyses of these programs. This was in keeping with the goals of the thesis, which was to determine the fit, emphasis, and utilization of the principles within a community-based heart health promotion program. The information then provided the basis for comparison

with the expert testimony. This would ensure that the invaluable experience of the past along with the contribution of current perspectives would be incorporated in the future development of heart health promotion programs.

5. **Creation of a draft of an open-ended questionnaire survey designed to elicit responses as to the relative importance of the above principles and their appropriateness in creating, organizing, and implementing a community-based heart health promotion program.**

The development, pilot, revision, and data collection portion of this thesis will be further addressed in a later section (chapter seven). The following steps will be outlined here.

6. **Establishment of a pilot study to examine the content and construct validity of the draft questionnaire (this procedure involved the identification of recognized authorities on the implementation and operation of heart health programs).**

7. **Revision of the questionnaire based on the responses provided by the pilot study respondents.**

8. **Determination of the study sample. The respondents were comprised of recognized Canadian authorities in the area of heart health promotion programs.**

9. **Telephone contact with the potential study participants to explain the nature of the study and to request their involvement.**

10. **Mail out of questionnaire and executive summary with subsequent telephone follow-up.**

11. Analysis of questionnaire responses along with a comparison with the experience of the past programs. This analysis was organized into three sections.

Part A was focused on the accuracy of the health promotion principles. The comments were discussed and subsequent modifications were made. Part B was directed at the organization and emphasis of the principles within a program design (i.e. assessment, planning, implementation, and evaluation). This included a comparison of the respondents' opinions combined with the results of the review of the three past programs. Part C discussed the experts' comments regarding the inclusion of practical components considered a priority as well as the important components collectively found in the analysis of the past programs.

12. Compilation of all data into a general model which utilizes health promotion principles within the realm of heart health and community-based programs for the use in a Canadian population.

The final outcome of this thesis was the compilation of all data – identification of nine health promotion principles, contributions of the three past programs, and expert testimony in the creation of an outline for the development of future heart health promotion programs. Thus, the research question, which asked to determine the accuracy of the identified health promotion principles and the fit of these principles in the design of a heart health promotion program, was achieved.

The next chapter is directed at the literature review involved in the identification and rationale of the health promotion principles which will provide the basis for analysis of the three past heart health programs.

Chapter Three:
Health Promotion and Health Promotion Principles

Introduction

Recent developments have placed a renewed emphasis on the value of health and wellbeing emanating within all levels of society (i.e. from individuals to governmental institutions). The following section will address the evolution and development of ***health promotion*** as a distinct strategy in the achievement of positive health. The outcome will be the identification of nine principles of health promotion deemed necessary in the creation of successful health promotion programs.

Evolution

"Health Promotion" is not a new concept; rather, it has evolved from a health education approach and developed into a new direction for health care. The first notable example of this occurred in the late 1880's. Ontario established a provincial Board of Health whose objectives were the dissemination of written information regarding sanitary conditions. By the time World War I came to an end, a Canadian federal educational venture was implemented for the control of venereal diseases. These actions were among the first to influence the creation of health education programs within several Canadian provinces directed at releasing health information to the public (Badgley, 1994).

After some initial concerted efforts, issues arose questioning the benefits of these practices in terms of quantifiable morbidity/mortality statistics. The first symposium on health education was held in 1961 to assess the issues of evaluation techniques and other methods for the diffusion of information (Badgley, 1994). The fulfillment of these goals

was sidetracked until the 1970's when health education was reintroduced as **health promotion**. The initial use of the latter term was mainly in reference to lifestyle behavioral models.

The new emphasis spurred the writing of a paper entitled "A New Perspective on the Health of Canadians" in 1974 issued under the name of the Minister of Health and Welfare Minister, Marc LaLonde. This approach expanded the use of behavioral education programs to include within them a strategy that was aimed at informing, influencing, and assisting individuals and organizations to accept more responsibility for and be more active in improving their mental and physical health. The initiative developed the definition of health to include four elements: biology, lifestyle, environment, and health care. This health promotion strategy was aimed at predominantly changing individual behaviors. Government-initiated lifestyle marketing campaigns and an emphasis on wellness in terms of nutrition, stress management, and exercise transcended all other interrelated factors later found to affect health in a more global manner.

Despite the fact that health professionals were unable to fully pursue the Report's recommended strategies, the Report itself encouraged the initiation of new perspectives by drawing attention to the fact that health was more than absence of disease. This was, in fact, a huge step toward future identification of a conceptual model of health promotion and laid the groundwork for further development of this concept. Although the development was restrained due to the political atmosphere of the time, the seeds for future development were planted. These seeds would form the structural and philosophical basis upon which the conceptualization of health promotion emerged.

In 1978, an international conference was held in the Republic of the Soviet Union that was sponsored by the World Health Organization (WHO). The outcome led to an emphasis on the concept of primary health care as the fundamental means of attaining the goal of "Health for All by the year 2000" (Community Health, 1990). This meant achieving an equitable distribution of health resources to enable people to attain a level of health that would permit them to lead more socially and economically productive lives. The report challenged all participants involved to develop their health services to progress towards this international perspective and goal.

Particularly in Canada, health professionals have paved the way towards determining practical methods of achieving this goal. One particular methodology is that of health promotion. From an historical perspective, the developments within health promotion represent substantial accomplishments towards achieving health for all and an enhanced form of wellbeing. Paradoxically, the gains made during the 1970's were limited by the constraints of governmental action despite public endorsement. The next section will review recent developments and achievements within health promotion. Given these advancements, nine principles have been developed that will serve as a primary point of analysis within this thesis.

Development

A transition occurred in the field of health promotion during the 1980's. While much of the emphasis in the 1970's had been on education, the term "promotion" was used to connote a wider range of meanings including government regulation, community participation, and basic changes to the social structure. Education took an advocacy role, and in 1986, two foundational documents were published in an attempt to revive and

strengthen the concept of health promotion (Ottawa Charter and The Framework). Later in the mid-1990's, a new document was developed to revive the concept of health promotion in the face of changing perceptions within health care (Action Statement).

First, in furthering the commitment to the goal of Health for All, health professionals in Canada worked in conjunction with the WHO to sponsor a conference held in Ottawa in 1986. The outcome was a revolutionizing document entitled the "Ottawa Charter". Five issues predominated:

1. building healthy public policy;
2. creating supportive environments;
3. strengthening community action;
4. personal skills; and
5. re-orienting health services.

The "Ottawa Charter" (1986) extended the conceptual framework and identified other elements basic to health promotion. It identified determinants for health reaching far beyond the scope of individual physical health. The determinants of health were delineated as peace, shelter, education, food, income, a stable ecosystem, sustainable resources, social justice, and equity. Based on this explicit denotation, seven strategic principles were established, which will be discussed further in the following section.

The second document, also released in 1986, was entitled "Achieving Health for All: A Framework for Health Promotion" (The Framework). The Framework (1986) emphasized the purpose of health promotion and identified similar strategies aimed at furthering the quality of health and health promotion for Canadians. It identified challenges that confronted health promotion in the face of the changing health of Canadians, such as the increase in chronic diseases and the incredible costs facing the health care system. Three mechanisms intrinsic to health promotion were stated: self-

care, mutual aid, and the creation of healthy environments. In order to achieve these goals, three strategies were proposed: fostering public participation, strengthening community services, and coordinating healthy public policies. All these concepts fit into a framework that offered a pragmatic means for achieving health for all. This led to the beginning of the acceptance of health promotion as a new conceptualization within which health was broadly defined. Health was now recognized as permeating every aspect of life:

> Health can be defined as a state of complete physical, mental, and social wellbeing. It is the extent to which an individual or group is able, on the one hand, to realize aspirations and satisfy needs, and, on the other hand, to change or cope with the environment. Health is seen as a resource for everyday life, not the objective of living; it is a positive concept emphasizing social and personal resources, as well as physical capabilities.
>
> (WHO, 1986, p. 73)

Moreover, this new health promotion movement introduced a new language and new ideas about what constitutes health and about how health promotion efforts should be delineated to achieve health. The prominent features of the health promotion movement include the following:

1. a broadened definition of health and its determinants;
2. placed emphasis on individual lifestyle strategies to achieve health for broader social and political strategies;
3. embraced a concept of empowerment;
4. advocated the participation of the community in identifying health problems; and
5. provided strategies for addressing these problems.

(Robertson & Minkler, 1994)

These documents did much to stir the debate and to raise uncertainty about the principles upon which health promotion was originally based. Since this time, the conceptual premise of health promotion has again been called to the forefront. In 1992,

Ronald Labonte declared that there was not a specific, all-encompassing definition of health promotion. Rather, he stated that there were basic principles founded in the Ottawa Charter that enabled some consensus among professionals in this field (Labonte, 1992).

> Health promotion can be defined as the process of enabling people to increase control over, and improve their health. It represents a mediating strategy between people and their environments, synthesizing personal choice and social responsibility in health to create a better future.
>
> (Labonte, 1992)

The third influential document was released in 1996. An "Action Statement for Health Promotion" was distributed to characterize the efforts of health promotion to date, given that the political and health climate had changed direction since the 1980's. This document, as well, delineated principles that were described in relation to specific priority areas for health.

Despite the extensive oral and written debate about the concept of health promotion, the original foundational and revolutionizing documents continued to provide support for the persevering effort to develop the concept of health promotion into a workable priority of health care. The underlying principles of health promotion are set out in the next section.

Principles of Health Promotion

A comprehensive review has been conducted to develop a set of health promotion principles. Based upon the results of the previous section, and for the purposes of further analysis within this thesis, the following health promotion principles have been recognized. These principles will subsequently be used as a practical basis for the planning of strategies in the development of health promotion programs.*

1. **HEALTH PROMOTION recognizes individual, social, and environmental factors interacting to influence health.**

It was the initial insight of Canadians that introduced the perspective that health went beyond that of being free of disease and illness. Lalonde (1974) introduced the concept that health was an interaction of three elements – biology, environment, and lifestyle (social) – that worked together to influence individuals in their attainment of enhanced health and wellbeing. Further developing this concept were documents such as the Ottawa Charter (1986), Framework (1986), and Action Statement for Health (1996). Though the Ottawa Charter and the Action Statement fully incorporate this view, it was specifically the Framework (1986) that described three mechanisms intrinsic to health and health promotion. First, *self-care* as it pertains to the decisions taken and practices adopted by an individual for the preservation, protection, and improvement of health. Second, *mutual aid* as it refers to the actions people take to help each other cope (social support) in the promotion of physical and emotional wellbeing. Third, *creating healthy environments* was intended to focus attention on the need to shape the conditions conducive to developing good health. These mechanisms form the basis of health

promotion strategies. Thus, the health promotion approach offers considerable potential and scope to meet the complex health challenges that face Canadians.

The intertwining of these elements have been utilized as an integral part of the heart health promotion program. Over the past two decades, the increased interest in this approach to the prevention of disease and the promotion of healthy lifestyles arose from the realization that CVD risk factors are, to a great extent, determined by behaviors shared by many individuals and that these behaviors are learned in a broad social and environmental context (Paradis et al., 1995 & Bracht, 1999). Many antecedent heart health promotion programs (i.e. North Karelia, Pawtucket, and Coalfields) relied on modifying the connection between these factors. This is a critical perspective in the establishment of a strong foundation for the development of heart health promotion programs upon entering the next millenium.

2. HEALTH PROMOTION supports a "holistic" approach in which the physical, mental, social, ecological, cultural, and spiritual aspects of health are recognized.

As identified prior: HEALTH can be defined as:

> ... a state of complete physical, mental, and social wellbeing. It is the extent to which an individual or group is able, on the one hand, to realize aspirations and satisfy needs, and, on the other hand, to change or cope with the environment. Health is seen as a resource for everyday life, not the objective of living; it is a positive concept emphasizing social and personal resources, as well as physical capabilities. (WHO, 1986, p. 73)

Out of this perspective evolved an approach to assist in attaining this state – ***health promotion.***

Health Promotion can be defined as:

> ... the process of enabling people to increase control over, and improve their health. It represents a mediating strategy between people and their environments, synthesizing personal choice and social responsibility in health to create a better future.
>
> (Labonte, 1992)

Alongside the development of this "holistic" perspective of health and health promotion, much has been discussed regarding the determinants of health. These include education, social support networks, income, employment and working conditions, physical environment, biology, personal health practices and coping skills, healthy child development, and health services (Hamilton & Bhatti, 1996 & Mustard & Frank, 1991).

This principle is especially concerned with the experiences of wellbeing in terms of happiness, meaning, and purpose, as with their physical functioning (morbidity, mortality, risks). Each aspect serves a purpose in forming the basis for a comprehensive health promotion focussed program. CVD pervades one's entire lifestyle. Changing behavior, attitude, and knowledge regarding CVD will also serve to effect changes in health in all other aspects of life. For instance, enhancing cardiovascular health may have an impact on one's mental health, which in turn, may influences one's social, cultural, and spiritual health. Therefore, this principle is an integral focus to maintain throughout the development of a heart health promotion program.

3. **HEALTH PROMOTION requires a long-term perspective. Time and support are necessary to create awareness and build understanding of the health determinants within individuals, communities, and organizations.**

Working the expanded definition of health and health determinants into the individual, community, organizational, institutional, and political arenas will foster the awareness about the determinants of health. To maintain this perspective, support of

health promotion is needed to ensure the success of community-based heart health promotion programs. Creating supportive environments (physical, economic, cultural, and spiritual) that recognize the rapidly changing nature of society will ensure positive impacts on the health of the people and consequently the health of the country (Hamilton & Bhatti, 1996). Greater understanding among policy and decision-makers in all sectors about the crucial role of the determinants of health, and the strong relationship of health and prosperity, would ensure health promotion actions were more supported (Federal Advisory Committee, 1994).

4. **HEALTH PROMOTION necessitates a balance between central and decentralized decision-making on policies that affect people's lives where they reside, in leisure, and work.**

This principle is firmly grounded within the perspective that there should be a strong emphasis on community benefits and public participation in problem posing and policy decision-making. The definition of community participation is the social processes whereby specific groups with shared needs living in a defined geographical area, actively pursue identification of their needs, make decisions, and establish mechanisms to meet those needs (Robertson & Minkler, 1994).

A new era of health promotion is emerging in heart health. It particularly focuses on using the expertise and resources available from professionals, but also involves people at the community level in a fuller and more participatory manner (Bracht, 1992). A priority of health promotion is to strengthen community action so that the community has the capacity to set priorities and make decisions on issues that affect their health (Hamilton & Bhatti, 1996). Therefore, the most effective methods for health promotion activities rely on the coalition of the people and groups in the community.

5. **HEALTH PROMOTION depends on a degree of multi-sectoral involvement including support of the community, organizations, businesses, and policy sectors. It bases its practice in the need to have similar values and vision of a preferred future.**

Health becomes the concern not only of the individual, but also becomes the responsibility of the community sectors of which they are a part. There is the increasing realization of the need for inter-sectoral cooperation at all levels (Labonte, 1992). It is essential that each and all players take a leadership or partnership role in the particular actions that best fit with their mandate, interest, ability, obligations, and sphere of influence (Canadian Public Health Association, 1996).

CVD affects the country on numerous levels. Understanding the alarming effects and out-stretched impact of the costs of CVD (in life lost, disability, and health care costs) each sector has an important role to play in arresting this disease and subsequently enhancing health and wellbeing. To have the potential for significant impact on the health of the population, comprehensive inter-sectoral health initiatives must be developed (Paper on Population Health, 1994). This collaboration across the sectors and in conjunction with the active support of general public is essential for the success of these health strategies.

6. **HEALTH PROMOTION must draw on knowledge from social, economic, political, medical, and environmental sciences as well as on experiential knowledge.**

Professionals and academics in various disciplines, are called upon to build bridges both within their own community and outwards towards the private, public, and voluntary sectors (Health and Welfare Canada, 1989). Health promotion advocates the combination of educational, organizational, economic, and environmental support for

actions conducive to health (Bracht, 1992). This merging of perspectives allows for an integrated approach to health promotion. Further, this will assist in the move towards choosing strategies conducive to enhanced health.

7. HEALTH PROMOTION utilizes the concept of empowerment as an important strategy in achieving long-term changes and sustainability of programs.

Health is significantly affected by the extent to which one feels control or mastery over one's life (Robertson & Minkler, 1994). For this reason, the new health promotion movement places an emphasis on empowerment as a primary health promotion strategy. Empowerment in health promotion is often defined as a process of helping people assert control over the factors which affect their health and to enhance people's belief in their ability to change their own lives. (Airhihenbuwa, 1994). This suggests the notion of partnerships between professionals and the community. Health professionals and experts take the role of an enabler in the process rather than the leader by assisting individuals and communities to articulate their health problems and identify the solutions. This is accomplished by providing access to information, supporting community leadership in decision-making practice, and assisting in overcoming obstacles (Labonte, 1992, Robertson & Minkler, 1994, & Airhihenbuwa, 1994).

This principle is founded within the precepts of *community development*. Community development can be defined as the voluntary cooperation and self-help/mutual aid efforts among residents which aim to improve physical, social, and economic conditions of the community (City of Toronto, 1993 & Labonte, 1992). The community development model of health promotion emphasizes the importance of empowering communities to define and take forward measures to improve the health of

their communities (Labonte, 1992). This can be actively achieved through the participation in alliances working to change unhealthy living conditions, supporting environments that promote healthy lifestyles, strengthening the capacity of the community members to identify issues, and persuading politicians to implement change (Canadian Public Health Association, 1996).

Community development is an effective vehicle by which health promotion can take place - whether it is directed at policy, environment change, institutional change, or personal skills development. At the heart of this process is *empowerment* of communities, their ownership and control of their own endeavors and destinies. Concrete and effective community action in setting priorities, planning strategies, and implementing them to achieve better health will theoretically foster the long-term maintenance or institutionalization of health promotion programs (Paradis et al., 1995, Green & Raeburn, 1988).

8. HEALTH PROMOTION emphasizes public accountability for costs, activities, and effects

In times of fiscal constraints, the effectiveness of health initiatives must be proven to ascertain scarce resources and continued funding. The importance of developing comprehensive evaluation methods (using various variables) is emphasized as an integral component of the health promotion program. The primary purpose of health promotion is seen as the transfer of control of important resources in health, notably knowledge, skills, authority, and money to the community (Bracht, 1992). Eventual sustainability of the program will be needed as experts withdraw from the program and implementation continues through community leadership.

If there is broad public support for and participation in population health initiatives, greater public understanding will be needed to provide the foundation for informed public participation and in the setting of priorities that will have an effect on Canadians (Federal Advisory Committee, 1994).

9. HEALTH PROMOTION advocates healthy public policy.

Policies shape how money, power, and material resources flow through society and therefore affect the determinants of health. To date, most policies in the area of health have supported healthy lifestyles (Canadian Public Health Association, 1996). The rationale behind the strategy of coordinating healthy public policy is the belief that public policies in general, act as incentives or disincentives to health (Health and Welfare Canada, 1988).

Healthy public policy is distinguished from traditional medical care policy by being ecological in perspective, multi-sectoral in scope, and participatory in strategy (Health and Welfare Canada, 1988). The health promotion approach espouses the belief that communication on health issues and the creation of structures to facilitate the process of policy development are of utmost importance. The fundamental principle for policy planning is to start where the people are and involve them throughout the process (Bracht, 1992). Widespread public awareness and consultation are necessary components of this perspective. This is especially true in upholding the health promotion perspective in meaningful heart health promotion programs.

*Adapted from Ottawa Charter (1986), the Framework (1986), and Action Statement (1996)

The effort to develop the concept of health promotion into a working priority of health care is seen in the use of these principles in various programs (i.e. North Karelia, Pawtucket, and Australia). These principles are illustrated in community-based programs where a priority is placed on one notable health condition that requires immediate intervention – heart health. The next section will explore how heart health and the use of health promotion come together to battle the issue of cardiovascular disease.

Chapter Four: North Karelia

Background

Cardiovascular disease (CVD) and lung cancer statistics indicated that North Karelia in Eastern Finland had the highest mortality among the developed countries. In 1971, Parliament, voluntary organizations, and the community signed a petition "to urgently undertake efficient action to plan and implement a program which would reduce the greatest public health problem of the country" (Puska et al., 1985 p. 91). In response, a panel of Finnish experts, international experts from WHO, Finnish authorities, and North Karelia representatives met to outline the scope and recommendations for further action. Based on this, the initial organization was established and the interventions and evaluation methods were planned. From the beginning, the project was to be an action-oriented program with evaluation and other research opportunities available. The value of accurate baseline measurements was necessarily assigned a high priority and the initial action was to establish measurement criteria and disease surveillance methods. In doing so, the project was strengthened through the collaboration with WHO and other international experts together with Finnish representatives. Once launched, a project field office and local project advisory boards were set up with participation from various community agencies. The primary objectives sought to create contacts for community involvement, introduce awareness campaigns, develop materials and action plans, and start local training. The original project was set for five years. However, the successes of this community-based comprehensive heart health promotion program encouraged persistent intervention and evaluation that continues today, twenty years later.

*The following description is a compilation of the following references: McAlister, Puska, Salonen, Tuomilehto, & Koskela (1982), Puska, Nissinen, Tuomilehto, Salonen, Koskela, McAlister, Kottke, Maccoby, & Farquhar (1985), Puska, P., Salonen, J., Tuomilehto, J., Nissinen, A., & Kottke, T.E. (1983), and Matarazzo, Wiess, Miller, & Weiss (1984).

Target Population

The target people can be described generally as having lower socioeconomic status and high unemployment amongst an economy based on farming and forestry. Medical resources as well as other services are dispersed and limited. The program to be developed aimed at the entire Finnish population, but middle-aged men whose disease and mortality rates were particularly alarming were targeted initially (See Table 3).

Table 3: CVD Incidence of Mortality/Morbidity in Finland As Compared to the Rest of the World in 1969-71

	Finland	North Karelia	Canada	Japan	United States
Mortality Per 100,000	811	1000	616	98	699

Goal

To reduce the incidence of cardiovascular disease through a community-based program effecting change by:

- Decreasing serum cholesterol by way of dietary behavior change;
- Decreasing initiation and habit of smoking; and
- Enhancing identification of high blood pressure and increase adherence to treatment regimes.

Other potential risk factors, such as physical inactivity, obesity, and type A behavior were not prevalent in this area.

Theory

Prior to the development of the North Karelia program, little was known about the practical effectiveness of the behavior change theories that were found in the literature. This limitation was a challenge to the planners. Their response was a decision to create a model that included the theoretical constructs found in community organization theory, behavior change model, communication – behavior change model, and diffusions of innovations into a single framework. What was created and unique to North Karelia, is known as the UNIFIED MODEL (see Appendix A for diagram).

The model was aimed at increasing knowledge, using persuasion, teaching practical skills, and in providing the necessary social and environmental support for performance and maintenance of behavior change. These strategies, in turn, were directed at reducing the level of cardiovascular risk factors and thereby the rate of cardiovascular disease.

Project Components

The practical framework for the development of the North Karelia project contains three main components: planning, implementation, and evaluation. It is these elements that were used in the original development of the program as well as to guide the project during implementation and evaluation.

Assessment/Planning

North Karelia combined the stages of assessment and planning. The formal assessment was included as an element within their defined planning stage to serve as a baseline from which to evaluate and to guide the planning of interventions. The major

elements were definition of objectives, community analysis, establishment of the project organization, and preparatory steps. The objectives were created in a hierarchical fashion. The overall goal of improved CVD health needs of the community led to the development of a sub-level of objectives that were based on the epidemiological data available regarding CVD. From there, the practical objectives and intervention measures were created underlying the planning of interventions.

Utilizing a community analysis approach was a priority within North Karelia's planning stages. Of particular importance was information collected on the epidemiological data from the area, including morbidity/mortality rates of the different health problems of the total population and of subgroups, and prevalence rates of possible factors of disease in the target population. Additional preparatory information included features of the geographical area, demography, and the socioeconomic factors of community. For purposes of intervention style, information on various lifestyles, community features influencing these behaviors, community leadership, social interaction and community channels, and other relevant factors related to the social or behavioral theories. The successes of the program also depended on support of the population, therefore, information was obtained on how people viewed the problem and how they felt about the possibilities of solving them. Local decision-makers and health personnel were also approached to ensure their cooperation and ultimately program success. Lastly, community resources and service structures were also considered before deciding on the actual forms of program implementation.

The project organization comprised of a principle investigator, co-principle investigators, a steering committee, and a coordinating center. This group was involved

in coordinating the field activities as well as research activities. In addition, a project advisory board was set up to enhance community participation and render feedback.

Implementation

Interventions

Program Objectives

1. Improved preventive services
2. Information
3. Persuasion
4. Training
5. Community organization
6. Environmental change

Improved preventive services

The Finnish Health Care System provides primary care through the use of community health centers governed by local communities. The objective of this intervention was to identify persons at risk and to provide appropriate medical attention. Hypertension (elevated blood pressure) and treatment adherence was identified as a problem. Changes were induced by reorganizing preventive services rather than to attempt to encourage the people of the communities to use the existing structures more effectively. The media and community organizations spread the message that hypertension was an important health interest and that individuals should participate.

This intervention increased the responsibility of the local public health nurses. These responsibilities included integrating blood pressure screening, referrals, surveillance and follow-up into the routine contacts with the people and also through mass screening programs. New offices were established at the current health centers to assist with this transition.

Information

The program designers utilized elements primarily from the Communication Behavior Change approach. Mass media was involved in educating the public about their health and how to maintain it. Newspaper articles, bulletins, leaflets, posters, signs, stickers and other educational materials, radio helped implement these principles. Groups and organizations distributed materials at work or helped organize educational meetings at worksites, schools, shops/places of commerce, volunteer organizations.

Persuasion

This concept is grounded in Diffusion of Innovation theory and Communication Behavior Change Model. It was known that information alone can not change behavior. Rather, people need to be persuaded and convinced ideas are socially acceptable and new lifestyle choices are enjoyable. In keeping with theory, new ideas were communicated through many different sources, to maximize perceived credibility. Endorsements were granted from prestigious institutions like WHO, from opinion leaders, and from formal and informal groups.

Training

While information and persuasion are often suffiecient to make simple behavior changes, with complex changes it is not always easy. For instance, one objective of the project was to encourage the addition of vegetables to one's regular diet. This requires challenging long-standing traditions in shopping and preparation. This is similarly true with smoking interventions. To assist with this challenge, McAlister (1982) declared four necessary steps in initiating more complex changes. (1) Modeling – demonstrating new

resources and action patterns (2) guided and increasing independent practice (3) feedback (4) reinforcement.

Community Organization

This approach was important in keeping with the underlying belief that change can not be maintained unless reinforced by social environment. Within the family, support was created by involving the entire unit where possible – cooking, anti-smoking, anti-hypertension regimes, coronary rehabilitation. Within the community, project staff and the local heart association, identified community leaders. These people participated in the Lay Leader program that involved training in the area of understanding risk factors, suggestions on ways to encourage change, information on the new activities being conducted and how to encourage participation. This training would then be practiced in their day to day contact with people.

Environmental Change

The environment is a determining influence on behavior and may directly influence health as indicated by the concept of Community Organization. Goals in this area include increasing availability of low-fat food and introducing restrictions on smoking. Assisting the local sausage factory in creating new type of sausage was one part of this program. As well, the county dairy promoted consumption of low fat products and even created some new ones. The indirect influence that evolved was the creation of consumer demand for new products and services.

The above interventions were systematically delineated based on the overall goals of the program. Therefore, the activities were deliberately chosen for easier enactment in

the community (Puska, et al., 1985). The use of the larger network of other organizations and opinion leaders encouraged program participation. Since the motivation and support of the general population formed a cornerstone for project intervention, much of the interventions were intended to be carried out by lay people and volunteer organizations. The integration of the program into the social organization was critical to ensure participation of the community and secure availability of resources.

Evaluation

The North Karelia program was first and foremost research-based. From the beginning, the evaluation efforts were designed into the project components. This included both a formative and summative evaluation. The formative evaluation occurred at various intervals throughout the program implementation. This was done to provide feedback to program staff regarding the interventions so that the program could be modified accordingly. This section will be primarily concerned with the summative evaluation.

This effort was aimed at five factors. First, the **feasibility** was evaluated to determine the extent to which it was possible to implement the program. This was done by survey and statistical data and included information on what actually happened in the community, the resources available and required, and how well the activities reached the population. Next, an evaluation of the **effects** were carried out. This was done in terms of behaviors, risk factors, and disease rates which were ultimate indicators of the overall objectives of the project. Sample groups were examined and compared to the baseline and a control reference group. Statistical data was especially pertinent as well as data collected with surveys. Next, the **process** was evaluated through an analysis of trends

throughout the program. The amount of resources used and how they were allocated evaluated **costs**. This was collected through statistical data. Lastly, other **consequences** were evaluated in terms of non-CVD health effects, socioeconomic, social, and emotional consequences that were found through the use of surveys.

Results

The achievement of the goals are best indicated in the following table:

Table 4: Main Program Results at 5-, 10-, and 20-years

Effects	Years			
	1970 (Baseline)	**1972-1977**	**1977-1982**	**1983-1992**
Cholesterol	7.1 mmol	6.7 mmol	6.3 mmol (11% decrease)	5.7 mmol
Active Smokers (Men)	52% were active smokers	44%	38% (36% decrease)	32%
Blood Pressure (Men)	149/92	143/89	145/87 (5% decrease)	142/85
CVD Mortality /100,000		Decreased 3.7 % from baseline	274	123
CVD Disability			Reduced by 27%	
Reported Subjective Health Status			Very good or good	
Savings in Health Care and Disability			$6 million	

Discussion of Results

Besides assessing the risk factor and disease changes, the North Karelia project has yielded positive information about the feasibility of the prevention program and demonstrated other positive findings, such as reduced disability payments, fewer reported general health complaints and emotional problems and popular satisfaction with the program.

The surveys show that health behaviors and risk factors in North Karelia clearly changed in the desired direction after 5-, 10-, and 20-year evaluations. Similar changes were noted in reference area, but to a lesser degree. Analysis of behavior and risk factor changes showed that they took place evenly in urban/rural and in different socioeconomic groups and little association with initial risk. This all indicates a general change and impact of the program in the community (Salonen, 1980).

Many of theories relating to community intervention were understood and developed only during the actual work. How, then, did the project developers think that CVD-related lifestyle and risk factors could be permanently achieved and maintained in the entire population in a cost-effective way? It was firmly believed among the entire group, from the beginning that a broad-ranged and determined intervention in the whole community is the most effective method to initiate the desired changes. Practical activities planned to be integrated within existing community organizations should be based on sound theoretical principles (Puska, et al., 1985). The role of the project was to catalyze and promote activities that would enable people themselves to make the necessary changes in their habits.

Underlying this perspective was additional rationale for initiating this health promotion project. It was generally felt that promoting general risk factor changes in whole populations would yield numerous additional health benefits. For instance, smoking cessation, reducing obesity, dietary changes (i.e. lowering fat intake, increasing vegetable and fiber intake) and consistent treatment of hypertension would combine to reduce the risk of several other chronic diseases, reduce incidence of premature death, and promote health and wellbeing among individuals and entire populations.

Overall, there is statistically significant evidence for success of the program in terms of feasibility of program implementation, risk factors changes, mortality/morbidity rates, costs and savings, and unexpected positive consequences. The entire project from 1972 –1977 cost $1.75 million dollars and the effects far out-weighed the initial cost. It was believed that results and experiences presented are an encouraging indication that, at least in favorable conditions, a comprehensive, determined, well-planned activity can lead to substantial improvements in risk factor patterns (Puska, 1985).

Principles of Health Promotion

North Karelia used health promotion as the primary effect designed to reduce unhealthy behaviors, improve preventive services, and create better social and physical environments (McAlister, et al., 1982). The following discussion will be a compilation of the health promotion principles drawn out from the project's inception. (Refer to Appendix B for list of Health Promotion Principles)

1. **HEALTH PROMOTION recognizes individual, social, and environmental factors.**

North Karelia's approach was aimed at influencing individual lifestyle and risk factors in the community with the goal of decreasing disease overall rates of CVD. Specifically, the project was firmly grounded in the belief that the risk factors for heart disease are largely determined by social forces and other environmental factors. Therefore, any major progress influencing disease rates has to deal with the environmental forces and structure (Puska, et al., 1985). The specific interventions designed to address this health promotion principle were the increased responsibility assigned to local public health services, establishment of new offices, hypertension registrar, and the use of media and community organization to facilitate the spread of heart health messages.

The project coordinators found a sequence of factors that they believed led to CVD. It involved a strong epidemiological approach with a concentration on the environmental (social and physical) as well as individual behaviors and biological risk factors (See chart in Appendix C) (Puska, et al., 1985). This principle of health promotion was clearly addressed within the projects planning stages. It provided a strong basis from

which to develop the interventions and a basis for evaluation and research. Having maintained this perspective throughout the process, one could attribute the long-lasting effects and unplanned positive consequences to this principle.

2. **HEALTH PROMOTION supports a "holistic" approach in which the physical, mental, social, ecological, cultural, and spiritual aspects of health are recognized. It is especially concerned with people's experiences of well-being (happiness, meaning, and purpose) as with their physical functioning (morbidity/mortality, risks).**

The main goal of the project was medically oriented in that it was to decrease the incidence of CVD. Since CVD alone was responsible for nearly two-thirds of all deaths among the middle-aged population, it was hypothesized that reductions in targeted risk factors would also probably have beneficial effects for other non-communicable diseases and health in general. Mainly, this perspective developed from summative evaluation data and intense research after program completion with the evolvement of health promotion. The well-being outcome was a positive consequence extending beyond the original program goals.

3. **HEALTH PROMOTION requires a long-term perspective to create awareness and build understanding of health determinants within organizations, communities, and individuals.**

In retrospect, the intervention that was developed that extended specifically to create and maintain a long-term perspective was the improvement of health services. This was used to identify persons at risk in terms of their behavior, lifestyle, and social and physical environment. Special attention was given to those with a risk of developing HTN as appropriate medical attention and surveillance was required. These changes were

induced by reorganizing preventive services within the local health centers and establishing new offices at the current health centers as the need was identified.

This portion developed gradually due to the pursuing of commitment from the political arena and the fair amount of organizational effort and training of local personnel that was required (McAlister, 1982). However, the cost analysis proved that with a change in allocation of resources and money, the savings went far beyond that of initial expenditure (as delineated in the latter section). In addition, the environmental changes were effective after program completion, but their extent was limited by national legislation, other national rules, or economic realities (McAlister, 1982).

4. HEALTH PROMOTION necessitates a balance between central and decentralized decision-making on policies that affect people's lives where they reside, in leisure, and work. There should be a strong emphasis on community benefits and citizen participation in problem posing and policy decision-making.

In 1971, Parliament, voluntary organizations, and the community signed a petition "to urgently undertake efficient action to plan and implement a program which would reduce the greatest public health problem of the country" (Puska, et al., 1985, p.91). In response, a panel of Finnish experts, international experts from WHO, Finnish authorities, and North Karelia representatives met to outline the scope and recommendations for further action. Since CVD is related closely to lifestyle, the population itself had to make the decision to organize itself to solve the problem.

There was always an underlying intent that in order to fully integrate the program into the existing social structure, opinion leaders, organizations, businesses, etc, would need to be involved in the decision-making process. Training was extensive, but at times the number of active participants were restricted due to conflicts with work or other

involvements (McAlister, 1982). At project completion, though, numerous businesses (meat and dairy), lay people, and politicians were involved in policy and program decisions.

5. HEALTH PROMOTION depends on a degree of multi-sectoral involvement including support of the community, organizations, businesses, and policy sectors. It bases its practice in the need to have similar values and vision of a preferred future.

The aim of the project was to inspire community action for change. To create community participation and exposure of the project, North Karelia devised a slogan "I am in the Project" that was dispersed among the population throughout the entire project (Puska, et al., 1985).

As well, the concept that everyone was at risk and that everyone had reason to change was prevalent. An interesting addition to the theory is that the content of messages were carefully constructed to suppress counter arguments and fear messages were accompanied with attainable recommendations for reducing fear. The credibility and endorsement of the message source was carefully considered. All these actions were done to enhance heart health as a national priority. In North Karelia, governmental agencies were perceived as credible sources of information and with this endorsement, the people were willing to accept public recommendations and to cooperate with community health workers. Thus, it was easier to regulate promotion and marketing of products (i.e. cigarettes, dairy, and meat products). Cultural acceptance of the notion of health as a public responsibility facilitates perception of the wisdom of shifting investments toward the prevention of disease. As well, governmental regulation of health care increased the extent to which preventative services could be shaped to serve the

interests of public health and foster a positive vision for heart health as included in the future of health care.

6. HEALTH PROMOTION must draw on the knowledge from social, economic, political, medical, and environmental sciences as well as on experiential knowledge.

Program contents were determined by existing medical, epidemiological, behavioral, and social knowledge. This would strengthen the rationale from the perspective of multi-sectoral involvement and would allow for the application to the local community setting. The key feature that was applied from the medical and epidemiological knowledge was to identify health problems and priorities in selecting the underlying health objectives. The behavior and social knowledge was utilized to design the actual program contents and activities. This implies an interdisciplinary approach in planning and implementation and in evaluation research.

The greatest potential in control of CVD lies in primary prevention whereby the "mass epidemic" should be tackled by "mass prevention" (Puska, et al, 1985). Once the risk factors had been agreed upon, choices still had to be made on intervention strategy. The community (total population) approach attempts to modify the general risk factor profile of the whole population. From the epidemiological point of view, major reductions in the disease rates in the community can be achieved only by the widespread reduction in the levels of the multiple risk factors. This implies community-wide effort to promote lifestyles that are likely to reduce the risk of CVD.

7. HEALTH PROMOTION utilizes the concept of empowerment as an important strategy in achieving long-term changes and sustainability of programs.

The health promotion program in North Karelia remarkably followed an empowerment strategy using various combinations of theories available at the time. The initial drive to effect change in the dramatic CVD statistics was from the community themselves. To begin, experts were available to create partnerships and involved key stakeholders – all of whom were involved in the initial assessment and planning stages. Following this, the interventions that were developed were reorganization of preventive services, persuasion, information, training, community organization, and environmental change. Though the interventions were driven by experts, there was an underlying notion that the community would not only be the target but also participants in the implementation phase. Eventually, the community and government would maintain ownership over various portions of the program.

The interventions that specifically addressed the strategy of empowerment were those that involved information, persuasion, and training interventions. The information intervention was geared to infiltrate the social structures to ensure all people received some form of the heart health message. Empowerment strategies were utilized in the form of providing access to information to support the community's involvement in heart health interventions and helping the people to realize their strengths in the battle against this disease process. The persuasion intervention ensured carefully constructed messages to enhance the belief among the people that they have the ability and means to change. The training intervention gave the people the opportunity to practice and learn new behaviors. Additionally, higher levels of change were instituted by the coordinated

partnership with lay leaders, local organizations, and businesses to implement changes on a government level and policy making.

8. HEALTH PROMOTION emphasizes public accountability for costs, activities, and effects.

North Karelia, from the inception, established an intense priority on evaluation criteria. Comprehensive baseline measurements were collected and this assisted in the establishment of criteria for further surveillance and evaluation. A **formative** and continuous monitoring during the program was set to ensure intervention effectiveness as well as to help guide the program. A comprehensive **summation** evaluation was done at various intervals (5-, 10-, and 20-years) to assess the overall results. The evaluation component was designed to not only evaluate risk factor changes, CVD mortality/morbidity rates, but also included an evaluation of the feasibility, effects, costs, process of change, and other consequence related to the program.

9. HEALTH PRMOTION advocates healthy public policy.

North Karelia had the advantage over most other programs that followed in that the drive to initiate change began with direct participation of the government. The initial reorganization of health services was done in direct partnership with the government bodies that controlled this area. The changes that were made could only have been done with the concerted efforts between community and government legislation. This value placed on heart health and the changes to the approach of the health services were upheld for years to follow and were maintained through governmental support.

Another direct inclusion of this principle in the North Karelia heart health promotion program was the community organization intervention. This was directed

toward upper levels of government and businesses. Local leaders were used to reinforce changes in the social environment while persuading and lobbying for policy changes to maintain the changes to the social structure.

Other policy changes that ensued were legislation against smoking and the types of dairy and meats to be available. Although North Karelia had the means to implement changes that infiltrated most segments of society and social behavior, this is viewed as one of the most remarkable success of a program of this kind.

Summary

North Karelia was a pioneer in the design of heart health promotion programs. The previous section provided an analysis regarding the inclusion of the previously delineated principles within the design of the North Karelia program. The following tables provide a summary as to the information regarding the emphasis of principle use within the North Karelia program as well as to the organization of the principles within the program phases.

Table 5 depicts the health promotion principles which were consistently used throughout the Program.

Table 5: Degree of Principle Usage in North Karelia

	Consistently	Moderately	Little
Principle 1	✓		
Principle 2		✓	
Principle 3	✓		
Principle 4	✓		
Principle 5	✓		
Principle 6	✓		
Principle 7	✓		
Principle 8	✓		
Principle 9	✓		

The above table suggests that North Karelia designers incorporated a health promotion perspective throughout their program phases on a consistent basis. The information gathered here was utilized in the following sections as a comparison with the

expert responses regarding the emphasis of the health promotion principle use and relevance within a program design.

In keeping with goals of this thesis to specifically organize the health promotion principles within a program design, the following table provides a basis for comparison with expert responses. Table 6 summarizes the use of the principles within the program phases as found in the North Karelia Program. Though North Karelia combined the assessment and planning phases, for the purposes of later analysis these phases were divided based on the methods used and the practical components utilized by the designers.

Table 6: North Karelia's Use of Health Promotion Principles Within Program Phases

Principles	Assessment	Planning	Implementation	Evaluation
Principle 1	✓	✓	✓	✓
Principle 2				✓
Principle 3			✓	✓
Principle 4	✓	✓	✓	
Principle 5		✓	✓	
Principle 6	✓	✓	✓	
Principle 7	✓	✓	✓	✓
Principle 8				✓
Principle 9	✓			✓

Implications

The general perception of success had led to rapid national adoption of innovations that originated in North Karelia (McAlister et al., 1982). This model has become popular as a practical and positive example that health promotion and control of modern chronic disease epidemics is feasible. North Karelia has been viewed as a promising case study rather than a critical test of the effects of health promotion.

The North Karelia project serves not only to demonstrate objectives of health promotion, but also to illustrate a cultural setting favorable for the development of innovations in public health and preventive medicine (Puska, et al, 1985). North Karelia was especially successful in its use of the health promotion principles. This project allowed for the use of health promotion strategies to reduce unhealthy behaviors, improved preventive services, and create a better social and physical environments (McAlister, et al., 1982). Due to the minimal availability of pertinent knowledge at the time, North Karelia can be considered a pioneer in the development of health promotion programs. Their expert use of principles that were really only identified many years later, enabled future programs to incorporate the practical components within the realm of a theoretical constructs such as health promotion principles. These are the foundations from which the principles of a health promotion program can and should be built. The purpose of this thesis was to discover the theoretical constructs founded in such programs, such as North Karelia and integrate them into practice within the current Canadian health care system.

Chapter Five: Pawtucket Heart Health Program

Background

The administration of Pawtucket Memorial Hospital noted the increasing statistics concerning CVD mortality and morbidity and the subsequent cost of the disease in terms of health care and disability. The Pawtucket Heart Health Program (PHHP) was established to develop and assess the effectiveness of a community-based program to prevent atherosclerosis by modifying risk behaviors that contribute to the development of cardiovascular disease (CVD). Experts were convinced that due to the mass prevalence of risk factors, the only way to decrease the burden of CVD was to modify behaviors on a population-wide basis. To achieve this objective, the project relied on the unique method of training volunteers to deliver project activities including screening, counseling, and referrals. This project was funded from 1980-1991.

The following information is taken from the following references: Carleton & Lasater (1995), Elder, McGraw, Abrams, Ferreira, Lasater, & Longpre (1986). Elder, Schmid, Dower, & Hedlund (1993), and Lefebvre, Lasater, Carleton, & Peterson (1987).

Target Group

The target group was predominantly the blue-collar sector where 44% of the population over the age of 16 was employed in manufacturing industries. The mean annual income was just above $19,000 per year. The population was stable indicating little loss to immigration or emigration. The reference population was similar, but larger in number.

Goals

1. To achieve significant reductions in coronary artery disease (CAD) morbidity and mortality, using strategies based on a community volunteer model; and

2. To develop the community organization framework necessary to maintain the health enhancement programs as professional staff withdraw.

Hypotheses

The project similarly began with five underlying hypotheses:

1. Community health change using lay volunteers is feasible and effective;
2. Health-promoting, population-wide risk factors behavior change will occur through a process of community activation with involvement by individuals, groups, organizations, and the entire community;
3. The creation of social network in support of behavior change will result in altered attitudes concerning risk factors behavior-related change, and in maintenance of these changes;
4. Actual risk factors prevalence, measured in successive random samples of the population, will decrease; and
5. The reduced estimated CVD risk will later be manifest as a reduction in atherosclerosis-related mortality/morbidity in Pawtucket compared with changes in the reference city.

Theory

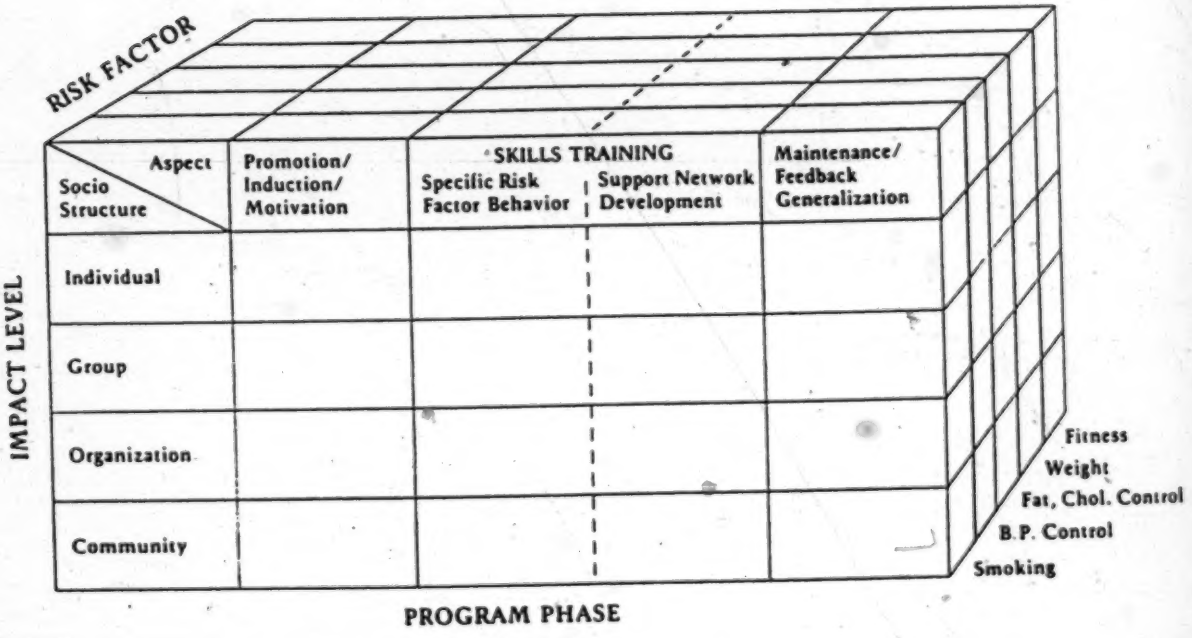
As behavior change theory and community-based approaches developed and gained experiential strength, the following theories provided a strong foundation for the development of PHHP: Social Learning Theory (SLT), Diffusion of Innovation, Community Psychology, Community Organization, Community Activation

SLT became the underlying theory in the creation of behavior change-focussed interventions. This also provided the basis for the intense focus on volunteers. The Theory of Diffusion of Innovation became especially important in PHHP intervention. Interventions were designed to introduce behavior change activities through social networks. The Community Psychology approach served as a template when PHHP

translated the theoretical elements into program interventions. This, too, provided the rationale for the use of volunteers. Of the three orientations comprising the Community Organization Theory, the *social action model* was predominant. Experts sought to organize coalitions, and the volunteers would enact the change strategies.

Insofar as the SLT and community organization approaches underlie the intervention process, a **Community Activation** orientation is maintained. This process is embodied in the volunteer. The amount of community activation generated by an activity is the behavioral index of the entire community's commitment to heart health programming (Elder, et al., 1987). The essential intervention strategy used community activation to mobilize community involvement in all aspects of heart health program planning, implementation, evaluation, and management by crafting a volunteer-based service delivery system. It was postulated that this process would lead to long term management of heart health programs by trained volunteers and be supported by local institutions. Transfer of a professionally managed intervention project to a community-owned prevention program was a major goal of the PHHP. Operationalization of the above theories combined to create the **Intervention Cube** (See next page for illustration).

Illustration 1: Pawtucket Heart Health Program
Intervention Cube



* Adapted from Lefebvre, R.C., Lasater, T.M., Carleton, R. A., & Peterson, G. (1987). Theory and Delivery of Health programming in the Community: The Pawtucket Heart Health Program. *Preventive Medicine* 16, 80-95.

Program Components

Assessment

It was important that data required to create a comprehensive baseline was collected to further program success and for future research purposes. The assessment component included household surveys of risk factors that were done over the entire year to exclude seasonal confounds.

Planning

During the assessment phase, the year was spent in the planning and piloting of potential interventions.

Implementation

Interventions

The PHHP intervention strategies were highly theory driven (Lefebvre, et al., 1987). The interventions were predicated on the idea that the simultaneous concerted use of multiple-change strategies directed across risk factors, phases of change, and focus levels would bring about the most effective and lasting changes in community health status. During the first three years of the program, volunteers were trained to provide the direct interventions with the community residents.

Behavior change programs and activities provided participants with the skills to stop smoking, control their blood pressure (BP), and improve their diets, control weight, cope with stress, and increase exercise. These were offered to individuals, small social groups, and organizations. Participants were taught not only to change their own risk behaviors, but also to encourage others in their social networks to alter their risk

behaviors and work for changes in their physical environment. To further the infiltration, screening, newspaper articles, and self-help programs were used.

Specifically, the following interventions were developed based within the Behavioral Community Psychology theory.

Walk-in BP stations – These stations were accessible in a variety of settings. Participants received blood pressure record cards, brief counseling on maintaining healthy levels, or, in cases where blood pressure was abnormal, they were referred to medical personnel.

Community Weigh-in Contest - Participants were given a number of choices and assistance. They watched films, were weighed, assisted to set weight loss goals, pledged money toward goals as incentive for weight loss, received a blood pressure management kit developed by PHHP, blood pressure and cholesterol measurements were taken, and participants were given the opportunity to join a weight loss group. The efficacy of the activity was proven by the continued participation in monthly weigh-ins.

Screening – a worksite blood pressure screening that provided measurement and long-term follow up.

Church advisory board – established to provide resources of heart health programs or host heart health activities. This was particularly innovative. Churches were used because of the number of persons served (2/3 went to church weekly) and the potential of repeated contacts. It also served as a community focal point. Organizers had access to an operational mini-media (bulletins). Moreover, the churches provided a natural support network, had high concern for the welfare of others, and had extensive experience in organizing, delivering, and maintaining volunteer-based programs. The

types of activities carried out in the churches included screening, group, or skills training. This intervention was founded in the collective efficacy element of the SLT.

Interventions were dynamic and multi-faceted. The Community Activation Theory also maintained that additional effective change techniques to utilize are campaign tactics, sharing of verified facts, persuasion within context of volunteer associations, mass media, and contact legislative bodies to change institutional and community policies and norms. Each specific intervention was designed to stimulate, facilitate, and maintain behavior changes. PHHP contacted over 30,000 people and volunteers invested over 30,000 hours. This level of involvement helped to demonstrate the feasibility and effectiveness of the Community Activation approach for preventing CVD based on SLT and principles of Behavioral Community Psychology.

Unique to PHHP, the interventions were implemented in three phases.

Phase 1: During first 11 months, the focus was on worksites, schools, churches and other organizations because it was thought that by working with groups, risk factor behavior change would be disseminated through social networks. Early adopters help spread the word and help spark heart health in organizations that seemed to be initially reluctant. Heart health interests and organization needs were identified. Organizational Task Forces were developed through which they could plan and coordinate activities and implement behavior change group programs.

This process was very slow and labor intensive. Though feasible, more resources were needed than initially estimated. Awareness levels remained low after phase 1 possibly because of the major focus on organization. This was possibly a main factor in hindering the progress of PHHP. As a consequence of the low awareness, a name

recognition campaign was developed. This was similar to the slogan campaign used in North Karelia's activities.

Phase 2: The decision was made to offer programs to the community to complement and accelerate changes made within organizations. Smoking, weight loss, and other risk factor change programs were offered and held in central community locations. The "Up In Smoke" campaign generated the largest success rate. The "Weigh In" program was also promoted heavily and deemed successful. These early community programs added diversity and innovation to PHHP interventions. Other interventions included the creation of nutrition groups, cooking and recipe contests which were developed into a heart health cookbook, and cholesterol measurement programs with a self-help nutrition kit. This phase evolved as being more flexible and responsive to community needs.

Phase 3: Additional activities were implemented, such as multiple risk factor screenings with direct participant counseling, education, and follow up. This phase was notable for the continued increase in organization and individual participation.

Evaluation

Formative and process evaluation was done by creating a community tracking system to provide ongoing assessment of intervening variables, impact variables, and use of new or existing programs. This was accomplished through content analysis of the media for health-related articles and annual interviews with health agencies to document trends for CVD risk factors, interventions, and their participation rates. This section was also responsible for conducting formative studies on the effectiveness of new interventions. Interestingly, PHHP was able to track the process of PHHP participation in interventions through the use of a "contact card" (Lefebvre et al, 1987, p. 83). The card

was coded for activity type, place, and date. This allowed the project coordinators to determine the socio-demographic profile of participants and to refine and target intervention programs, assess the immediate and long-term impacts of the programs through follow-up interviews. It also provided a historical record of the PHHP intervention effort.

Risk Factor Results

Overall, there were no statistical differences in risk factor changes, rather participation rates became indicative of positive involvement. Participation rates were most impressive, 94% of the population had their blood pressure measured in the initial 6 months. The weight loss group had 40% join initially, but 10 weeks later only 66% of the original participants returned for a weigh in. In total, the participants lost 1061 pounds of weight and subsequent decreases in cholesterol levels were noted. At further follow up, 80% of participants had lost weight during the contest and 75% continued in the program. Blood pressure screens were effective by showing a numerically small decrease in systolic blood pressure. There was an original high reading with 34 people of the 409 screened, but, after 2 years, of the 863 screened, no one registered with a high blood pressure reading. Overall, there was a continual increase in program participants in the various interventions over time. This implied that screening encouraged rather than replaced risk factor behavior change activities.

Additionally, phase 1 yielded 53% participant rate in screening interventions, 35% in risk factor change groups, and 2% in self-help activities. Phase 2 resulted in a 71% increase in blood pressure screening, 28% in group activities, and 12% in self help. Phase 3 showed 55% (n=3978 up from 593 in phase 2) screened and a 29% increase in

the self help program. Despite the range of activities offered, blood pressure screening drew the most participants.

Discussion

The primary goal of the program was to significantly decrease the mortality/morbidity of CVD. Specific reductions in CVD mortality/morbidity were projected to be 16%, but this was reduced to 8% post-expert withdrawal. These changes were deemed marginal and not statistically significant. The main conclusion was that achieving cardiovascular risk reduction at the community level was feasible, but maintaining statistically significant results was not (Carleton & Lasater, 1995 and Shea & Basch, 1990). In terms of the second goal of the program – the development of the community organization framework – the PHHP had learned that early community involvement in the planning for health promotion was essential for program acceptance (Lefebvre, et al., 1987). Programming efforts must be flexible to adapt to different kinds of people at different stages of change. Positive effects included the fact that the PHHP became part of the community environment. This was achieved through linkages with other health agencies, co-sponsoring events by city government, and participating in large community events. As well, it was determined that volunteer participation was integral to this process (Carleton & Lasater, 1995).

Principles of Health Promotion

1. HEALTH PROMOTION recognizes individual, social, and environmental factors interacting to influence health.

The focus of the PHHP was both on helping the individual adopt new behaviors and on creating a supportive physical and behavioral environment. The program targeted three dimensions. First, the risk factors (cholesterol, BP, smoking, obesity, and physical inactivity) were the focal point (Carleton et al, 1995).

Second, the PHHP emphasized interventions focussed on the phases of individual behavior change. The objectives were to promote awareness and agenda setting, to provide training in behavior skills, to aid in the development of social supports, and to develop strategies for the maintenance of new behaviors (Carleton et al, 1995). Interventions were predicated on the idea that the simultaneous, concerted use of multiple-change strategies directed across the risk factor phases of change and, by focussing on a range of levels would bring about the most effective and lasting changes in the individual, and therefore, the community health risk status (Lefebvre et al, 1987, p.83).

Third, individuals were targeted while volunteers worked closely with groups and organizations to which they belonged and provided programs available to all community members. This dimension stemmed from the concept of Community Activation (Carleton et al., 1995).

Interventions were founded upon assumptions and premises set out in the SLT whereby deterministic relationships exist among the individual, their behavior, and the environment (Lefebvre et al., 1987). Using this theory, PHHP was able to incorporate the

blending of individual and community-oriented change strategies in planning heart health interventions fulfilling the obligations set forth in this health promotion principle. When translating theory into practice, several principles of behavioral community psychology were found to serve as a template to permeate the community, its organizations, and social groupings with emphasis on behavior change: ease of adoption, flexibility, low cost, acceptability, visibility, and community involvement (Lefebvre et al., 1987 & Carleton et al., 1995).

2. **HEALTH PROMOTION supports a "holistic" approach in which the physical, mental, social, ecological, cultural, and spiritual aspects of health are recognized. It is especially concerned with people's experiences of well-being (happiness, meaning, and purpose) as with their physical functioning (morbidity/mortality, risks).**

One goal of PHHP was directly focussed on decreasing the CVD incidence in Pawtucket. However, it could be that unintended results of a heart health promotion program were the development of not only physical health, but also of general well-being. Participation and involvement influenced people's experiences and assisted in the holistic aspects of health. Although no evidence was cited, it could be extrapolated that through socialization, becoming involved, and sharing experiences could influence one's perception of health. This was especially so given the engagement of the church in advocating many of the heart health interventions.

3. **HEALTH PROMOTION requires a long-term perspective to create awareness and build understanding of health determinants within organizations, communities, and individuals.**

The original program principles that evolved from the chosen theories were acceptability and visibility. It was deemed important to become cognizant of prevailing

community norms and values and hence, initiate the development of interventions accordingly. In addition, programs that were outwardly prevalent in the community were found to enhance adoption and integration. Initially, though, this underlying principle was not utilized to the full extent. Consequently, upon evaluation of the project, it was found that early community involvement in planning of health promotion programs was essential for program acceptance. Attempts were made to rectify and modify the project after the first formative evaluation by instituting phases 2 and 3 aimed at making programs available to all community members and creating feelings of community ownership.

Positive examples of creating awareness and inducing involvement included the walk-in blood pressure stations, weigh-ins, and creating the Church Advisory Board.

4. **HEALTH PROMOTION necessitates a balance between central and decentralized decision-making on policies that affect people's lives where they reside, in leisure, and work. There should be a strong emphasis on community benefits and citizen participation in problem posing and policy decision-making**

The essential intervention strategy was founded in the theory of Community Activation. The transfer of a professionally managed program to a community-owned prevention program was a major goal of PHHP. This entailed explicitly mobilizing the community involvement in all aspects of heart health program planning, implementation, evaluation, and management (Lefebvre et al., 1987). The PHHP designers figured that the most effective way to create this atmosphere was by crafting a volunteer-based service delivery system. It was believed that implementing this process would lead to the position in which long-term management of heart health programs would continue by trained volunteers from the community and would be supported by local institutions (businesses,

schools, non-profit groups). In addition, much time and effort was spent on incorporating the PHHP as an integral part of the community environment. This was facilitated by the involvement of various credible institutions and by modifying the focus of interventions part way through the program.

5. **HEALTH PROMOTION depends on a degree of multi-sectoral involvement including support of the community, organizations, businesses, and policy sectors. It bases its practice in the need to have similar values and vision of a preferred future.**

PHHP achieved the incorporation of this health promotion principle by giving priority to establishing linkages within the community. They melded with other health agencies, co-sponsored events with city government, and participated in larger community events. These actions served to facilitate project acceptance into and by the community.

As well, by incorporating the data collected from formative evaluations, changes were made to further the integration of this principle in the program. Phase 1 had focussed on organizations (i.e. worksites, churches, schools, and other organizations). The original rationale was that risk factor behavior changes would be disseminated throughout the social networks of the individual participants. Phase 2 was developed to include the community as a whole. Phase 3 evolved to introduce more interventions targeted on risk factor activities (Elder, et al., 1986). The goals of this project were furthered by involving the community, organizations, etc., in establishing a vision of a preferred heart health future. By creating the sense of ownership of the program through the use of an extensive volunteer system, this could establish the same perspective of heart health as a priority for the future.

6. **HEALTH PROMOTION must draw on the knowledge from social, economic, political, medical, and environmental sciences as well as on experiential knowledge.**

Essentially, much of the foundation of this program was developed from an extensive theoretical basis as discussed prior. Much effort was taken to create a sound theoretical basis for the PHHP using well-known and accepted theories. The PHHP model served as a useful guide to conceptualizing and planning community-based programs within the specific environment of Pawtucket. New knowledge was being created by the testing of this model.

In addition, at the time of program inception, the baseline knowledge regarding the behavior of individuals, the influence of the environment, and the significance of the social milieu had been strengthened through extensive past research and experience. After the summative evaluation, it was noted that accelerating CVD risk factor changes would likely require a sustained effort including reinforcement from the state, regional, and national policies and programs (Carleton & Lasater, 1995).

7. **HEALTH PROMOTION utilizes the concept of empowerment as an important strategy in achieving long-term changes and sustainability of programs**

PHHP utilized this health promotion principle in three important ways. First, as a primary goal of the PHHP was community organization. The strategy was to mobilize the community to be involved in all aspects of the heart health promotion program (i.e. assessment, planning, implementation, and evaluation). The use of a volunteer system was embodied within this strategy. Volunteers were recruited from various community sectors and trained for the implementation and eventual management of the program. Thus, this would ensure long-term sustainability of this program.

Second, using community members as volunteers helped secure the belief amongst other community members that they, too, had the ability to change their lives. This would be a critical factor in the establishment of a supportive environment for the maintenance of behavior change.

Third, initial interventions were directed to working in partnership with organizations, i.e. workplaces, schools, and churches. Establishing this commanding alliance would assist in the future support by the general community and facilitate the dissemination of heart healthy lifestyles. This, in turn, would also assist in the transfer of leadership of the program to the volunteers. Together, these three elements espouse the value placed on the strategy of empowerment.

8. HEALTH PROMOTION emphasizes public accountability for costs, activities, and effects

This principle was actively portrayed in PHHP's extensive use of a volunteer system (lay people). Specific reasons for the use of volunteers were that they serve as peer models for behavior change, those with high efficacy could be identified and networked to influence organizational and community structures and norms, and they provide a support network for themselves and others. Also, the involvement of volunteers promoted the diffusion of heart health information, multiplied the reach of professional staff into the community to effect behavior modification, and provided the volunteers with opportunities to practice heart health behaviors regularly. Most importantly, volunteers promoted community ownership through the active recruitment and participation of other citizens, organizations, etc. in planning, implementation, evaluation, and management of heart health programs.

The concept of public accountability is achieved as the community ultimately assumes ownership and responsibility for the entire project. Consequently, this method would prove to be most cost-effective in the short- and long-term.

9. HEALTH PROMOTION advocates healthy public policy.

Though PHHP maintained a risk factor reduction goal throughout, the timeframe allocated to this program was not sufficient to demonstrate any substantial change in the development of public policy or legislate widespread policy changes. However, in this community, the church was invaluable in its support of heart healthy behaviors. Advisory boards were created and they played an integral role in implementing more intensive interventions in CVD risk factor changes. Additionally, surveys indicated that the demand for heart healthy products was increasing. This seems significant in that the potential of this demand might eventually lead to policy-type changes. Together, these factors suggest that large structural changes are not only feasible, but are also directly influenced by the social milieu. It is significant, however, that the PHHP did not produce clearly stated healthy public policy.

Summary

The following tables provide a summary of the information found in the proceeding sections of this chapter. Table 7 depicts the health promotion principles which were consistently used in the Pawtucket heart health program.

Table 7: Degree of Principle Usage in Pawtucket

	Consistently	Moderately	Little
Principle 1	✓		
Principle 2			✓
Principle 3	✓		
Principle 4	✓		
Principle 5	✓		
Principle 6	✓		
Principle 7	✓		
Principle 8	✓		
Principle 9			✓

The above information suggests that Pawtucket designers consistently utilized the majority of health promotion principles during the operation of the program. Interestingly, two principles were found to be considered only marginally.

The following table (Table 8) summarizes the organization of the principles within program phases which provided a comparative basis for the analysis portion of this thesis.

Table 8: Pawtucket's Use of Health Promotion Principles Within Program Phases

	Assessment	Planning	Implementation	Evaluation
Principle 1	✓	✓	✓	✓
Principle 2				✓
Principle 3			✓	✓
Principle 4	✓	✓	✓	✓
Principle 5		✓	✓	
Principle 6	✓	✓	✓	
Principle 7		✓	✓	✓
Principle 8			✓	✓
Principle 9				✓

Implications

The fact that numerous participants volunteered over 30,000 hours demonstrates the feasibility and effectiveness of this approach aimed at reducing CVD. The strong theoretical base provided the foundation required for the successful integration of a heart health promotion program into this community and subsequent CVD changes. It is believed that the multi-faceted, behavior-change interventions increased individual efficacy and would contribute to lowering CVD prevalence. Further, the enhancement of the community's sense of collective efficacy in dealing with this major public health problem contributed to the program's maintenance after funding was withdrawn. Although PHHP was highly risk factor oriented and no significant data were generated to denote a drop in the level of CVD, there were significant portions that, if used in appropriate settings, could be utilized to induce further reaching effects within a community-based heart health promotion program.

Chapter Six: Coalfields Healthy Heartbeat Program

Background

National mortality/morbidity statistics indicated that cardiovascular disease (CVD) remained a major cause of death and disability in Australia. Relative to other regions, the Coalfields district, within the Hunter region of New South Wales, had a significantly higher mortality rate from CVD compared to state and national averages (Higginbotham, Heading, McElduff, Dobson, & Heller, 1993).

Inspired by the WHO's initiative of "Health for All", in 1988 the Commonwealth Department of Health commissioned a revision of health goals and targets (Nutbeam, Wise, & Leeder, 1993). The first step was the establishment of the Better Health Commission that year (Leeder, 1995). Its proposals led to the states and territories undertaking concerted health promotion activities through the National Better Health Program. Goals and targets relating to CVD were particularly emphasized.

In 1990, the formation of the Coalfields Healthy Heartbeat community action program (CHHB) was created stemming from initial health awareness-raising efforts that began in the 1980's. After two public meetings, a steering committee was formed comprising of community members, health workers, and a research group from the University of Newcastle.

The following is a compilation of information on the CHHB based on the following references: Higginbotham, N., Heading, G., Pont, J., Plotnikoff, R., Dobson, A.J., Smith, E., Metcalfe, A., Valenti, L., & Croce, N. (1993); Williams, P. & Plotnikoff, R. (1995); Baum, F., Santich, B., Craig, B., & Murray, C. (1996); Higginbotham, N., Heading, G., McElduff, P., Dobson, A., & Heller, R. (1999); and Leeder (1995).

Target Group

At the turn of the century, the isolated Coalfields area was transformed with the discovery of coal. People migrated from Northern England and Wales bringing a strong Anglo-Celtic heritage. Presently with a population of almost 50,000, there remains a strong reliance on coal-mining and other predominantly manual occupations which dominate the area's social and economic life. The Coalfields area was classified as an area of low socioeconomic status with cycles of high unemployment and generally having a lower educational attainment.

Goals

The goals of the CHHB were:

1. an increase in life expectancy and a decrease in premature mortality;
2. a reduction in morbidity and an increase in the average number of years of freedom from serious disease or disability;
3. an increase in health-promoting behavior and a decrease in health-damaging behavior; and
4. provision of an environment conducive to the full development of the health potential of individuals.

Objectives

1. To develop, promote, implement, and evaluate a national health promotion program;
2. To achieve substantial impact and improved health status outcomes throughout the life of the program and the longer term;
3. To provide a national strategic guide for action for other organizations;
4. To encourage structural changes that support the promotion of health and prevention of ill-health in both health and other sectors;

5. To promote the understanding of the "health for all" philosophy and approach;
6. To encourage and support the incorporation of health promotion and illness prevention strategies in government (at all levels), community and private-sector policies and programs; and
7. To demonstrate the benefits of a coordinated national approach to address major health issues.

Theory

The two underlying conceptual models the CHHB incorporated were Community Activation Theory and Protection Motivation Theory.

Community Activation Theory is a health promotion strategy reported to be beneficial for reducing heart disease based on the use in other health promotion programs. It is associated with empowerment, participatory democracy, and self-sustainment (Higginbotham, Heading, McElduff, Dobson, and Heller, 1999). CHHB found this to be an important and valuable perspective to maintain throughout the program duration.

Protection Motivation Theory (PMT) (Rogers, 1983) was the primary theoretical basis used in the Coalfields program. This theory attempts to explain the cognitive mediation process of behavioral change in terms of *threat* and *coping* appraisal. The PMT's *threat* appraisal component depends on (1) One's estimation of the threat of the disease (perceived severity) and (2) one's estimation of the chance of contracting the disease (perceived vulnerability). The models *coping* appraisal consists of (1) one's expectancy that carrying out a recommendation can remove the threat (response efficacy) and (2) belief in one's capability to execute the recommended course of action successfully (self-efficacy). According to the theory, the emotional state of fear also

influences the attitudes and behavior change indirectly through the appraisal of the severity of danger. Relying on the concepts on health promotion and the above perspectives, the CHHB was organized, planned, implemented, and evaluated accordingly.

Project Components

Assessment

The action group asked that a survey be undertaken to identify the community's particular needs and to assist with the development of culturally appropriate health promotion programs. A *needs survey* was administered by mail in the Coalfields region and a comparison community – Newcastle suburbs. The survey had four objectives which provided interesting results:

1. To determine the perceived importance of heart disease compared with other health problems.

The anxiety about heart attack was rated only 11 out of 17 in the Coalfields area. This could be attributed to the high prevalence of heart disease in the region and the commonly available means of treating it (pills for angina and high blood pressure and bypass surgery). This engenders a meaning about the disease that is non-fearful and commonplace in everyday lives.

2. To compare the depth of concern about heart disease in relation to other social problems.

Drugs, crime, and road safety dominated the concerns in both areas. This could likely be explained through an understanding of the community itself. Good health was assumed to be a normal state among the people of the region until illness was experienced. Other social experiences effect people's everyday lives more than concerns

about heart health and therefore gained ascendancy in the hierarchy of worries (survey). As well, the people in the Coalfields region were consistently more worried about all issues on the list as contrasted with the comparison population.

3. To estimate the impact of previous health promotion activities.

The Coalfields respondents were significantly less likely than the Newcastle reference area to have heard about or paid attention to current and past health promotion initiatives. Those that did, responded positively to the interventions. The responses were analyzed further in terms of age, sex, occupation, and education levels. Respondents aged 34-54 years were more likely to respond to low-fat diet and non-smoking recommendations. Education, sex, and occupation were not associated with the level of interest in such recommendations.

4. To compare two places with different socioeconomic status with respect to these heart health issues.

Results of the needs survey also indicated that a substantial majority in the Coalfields area (the lower socioeconomic status) reported that the individual, the family, and the medical profession, in this order, were responsible for heart disease prevention. As well, less than 50% of respondents felt that local community groups should "sometimes" get involved with program initiatives. Doctors visits were also addressed. The results showed that approximately 40% of people visited their doctors once or twice a year and rarely during these visits were heart disease risk factors discussed. These additional survey results provided an interesting insight with respect to project planning.

Epidemiological statistics were also utilized and were deemed important for numerous reasons. These consisted of the ability to establish a health status base line, provide data about the burden and distribution of illness in the community, and to

critically appraise evidence about etiology of illness attributed to modifiable risk factors (Leeder, 1995). Additionally, the estimates of potential years of life lost through illness and injury were calculated. The statistics had also enabled an economic analysis which indicated great costs to the healthcare system and to disability insurance carriers. This provided a critically important corollary to the definition of health care priorities.

Planning

The planning for the CHHB began by merging with the original healthy heart group which was primarily involved in awareness raising techniques. Once the Steering Committee was formed and assessments were completed, the official planning of intervention strategies and evaluation protocols would begin. During this phase, a community health worker was recruited to organize and oversee the implementation of the interventions. Significantly, provisions were put in place which would lead to the eventual community ownership of the CHHB.

Implementation

Interventions

The interventions were strongly based within the Protection Motivation Theory and founded on the idea that multiple methods would provide the most effective behavior change strategies. The challenge was to devise strategies which would have longstanding effects on the behavior of individuals and on the environments that shaped their behavior (Williams & Plotnikoff, 1995). Programs that are culturally sensitive are more likely to have an impact (Higginbotham, et al., 1993). As a special consideration with this population, strategies incorporating values, language, and symbols which are meaningful

to various groups and do not appear exclusively to be promoting heart disease prevention would be more successful than disease-specific programs aimed at the general population. Therefore the following interventions were implemented.

1. Awareness raising and public relations (1986) – The initial activities were to raise awareness of CVD and the program itself. This worked in continuation with initial efforts from 1986 and included media, displays, promotions, and guest speaking.
2. Mobilizing community resources (1990) – This strategy meant working with committees comprised of opinion leaders from the community and incorporating heart health awareness and other interventions into well attended other community events. As well, there were a high number of people participating in rehabilitation programs as a result of experiencing heart disease morbidity.
3. Heart health rehabilitation (1992) – Strengthening of the rehabilitation exercise program evolved to include trained telephone counselors.
4. Promoting healthy lifestyles – Several initiatives were already in place and therefore the CHHB enhanced their operation and also introduced more directed initiatives. These were:

    - cooking classes which included demonstrations and grocery store tours
    - weight control classes and support groups
    - gentle exercise – i.e. walking, tai chi
    - anti-smoking – specifically directed towards adolescents

5. Institutional and environmental development – Interventions included the operation of a walk- in resource center, direct school and workplace environment heart health initiatives, restaurants, clubs, retailers, and industry changes.

6. Mobilizing institutional resources – By the end of the project the following had been created: University research and educational resources were available, regional assistance scheme funding, and ongoing funding by NSW health department.

Evaluation

Special attention was given to planning and conducting evaluation protocols. Both process and summative evaluations were utilized. Process measures were used to determine the impact of the CHHB in terms of the number and range of activities available that promoted knowledge and awareness of heart health. Other important benchmarks were the participation rates which would indicate future sustainability of activities by local residents.

Epidemiological evaluation results were primarily available through the long-standing MONICA project already in place. *MONICA* is the acronym for *moni*toring of trends and determinants of *ca*rdiovascular disease. This format had been used for several years in many countries worldwide and was believed to be an accurate source of measuring the rates of CVD.

To determine risk factor prevalence, a series of surveys were distributed. The first was done in 1983, next between 1988 and 1989, and the last done in 1994. The respondent results were found to be acceptable in terms of participation and the levels of success in reaching various subgroups. Additionally, several focus groups were done with key community informants as well as people involved in the program at various levels.

Together, the information combined provided for a complete evaluation of a community-based heart health project. The results will be briefly discussed in the following section.

Results

Relative to the accomplishment of goals and objectives, the following discussion section will provide greater insights into the results of the CHHB.

In accordance with the outlined objectives, the development of the National Better Health Program was completed. In fact, the greatest achievements extending from this was success in increasing awareness of health promotion activities within the community as well as a greater understanding and acceptance of health promotion amongst health professionals. Other benefits that resulted were: the promotion of local based projects that served to increase community involvement, integration of CHHB into existing initiatives, some structural changes, and continued media coverage.

The nine year monitoring of CVD events indicated no clear reductions in non-fatal heart attacks. However, there was a larger reduction in coronary deaths. The combination of these represents a statistically significant reduction in case fatality for men. This meant that people were more likely to seek immediate treatment.

In terms of risk factor levels, there appeared to be a clear pattern of marginal improvement. This was seen in reductions in serum cholesterol, decreases in blood pressure, increases in mean body index among those who exercised, and decreases in those that did not. Smoking levels remained unchanged.

An overwhelming success that warrants separate reference was the School Healthy Project. Enthusiasm remained positive throughout the project and support from all levels remained strong. Upon completion of the pilot project, 15 other schools in the area were looking to adopt the model. It could be stated that as these school-wide

interventions continue, this might be reflected in lower rates of CVD in the more distant future.

The goals of the CHHB were difficult to determine within the allocated time. To recognize improved health status outcomes would be difficult given the brief duration, the short term projects, and limited extent of resources. Project organizers stated that with continued funding, more attention to structural changes, and increased emphasis on collaboration across sectors and the community, long term benefits might well be accrued.

Discussion

This program began with a $2.4 million budget (.5% of annual Australian budget) for four years. It was a commonwealth and state cost-shared national health promotion initiative aimed at reducing health inequalities and increasing the health of the general population. The entire Australian health promotion initiatives were inspired by WHO's "Health for All" goals.

After 6 years, CHHB fostered the perception as being an institutionalized community resource for heart health promotion. The CHHB operated under primarily local management and was able to retain State Department funding.

The greatest challenge in this population remains community resistance as a whole. The activities had to be selected for interested subgroups such as families of heart disease patients, school children, retired people, and women concerned with family nutrition and body maintenance. The lessons learned within this setting was the

importance of recognizing and understanding the culture within which the community lives and the inherent value of clearly identifying interest groups.

Another key lesson for policy makers and program planners on why this community did not attend to conventional health promotion discourse was a distinct sense of communal responsibility to health, rather than an orientation to risk factors faced by individuals. Therefore, health promotion interventions would fail to flourish in such a community unless strategies and messages somehow resulted in a connection with wider segments of the population and resonated with cherished ideas and compelling local identities. The success of the school health initiatives particularly exemplify these lessons.

Principles of Health Promotion

1. **HEALTH PROMOTION recognizes individual, social, and environmental factors interacting to influence health.**

These elements were utilized as an integral portion from project inception. This was especially noted in the underlying theories – Community Activation and Protection Motivation Theory (PMT). The targeted risk factors were individually focussed (i.e. diet, exercise, blood pressure, and smoking). However, the goals and objectives delineated were founded within the elements of this principle and included a strong perspective in social and environmental changes. A fundamental strategy was to invoke a community education approach that sought widespread behavior modification of the social environment in order to facilitate healthy choices by individuals – particularly those in disadvantaged groups (McMicheal, 1989). Thus, the interventions were specifically

aimed at increasing individual knowledge and skills, enhancing the available environmental structures, and developing supportive environments.

The Protection Motivation Theory is founded with the individual (i.e. individual cognitive threat appraisals) and was used as a basis for selected interventions. However, concepts from the Community Activation approach were also incorporated extensively. Recognizing the special cultural considerations required in this region, provision were made to create an environment conducive to supporting the health of individuals and ultimately to support the program.

2. **HEALTH PROMOTION supports a "holistic" approach in which the physical, mental, social, ecological, cultural, and spiritual aspects of health are recognized. It is especially concerned with people's experiences of well-being (happiness, meaning, and purpose) as with their physical functioning (morbidity/mortality, risks).**

In maintaining this holistic perspective of health, Coalfields needed to consider the inequalities in health status and the values of the people. These were important lessons gained during the program and especially from information collected through the needs assessment. It meant that awareness interventions needed to be carefully constructed so as not to invoke negativity or interference from the "paternalistic" health promoters while encouraging interest in heart health. The credibility of this idea of shifting populations towards a lower level of risk depends on appreciating the fundamental distinction between statistical norms and biological norms (McMicheal, 1989). CHHB programmers skillfully recognized that life experiences, norms, and values directly affect an individual's perception of their experience of wellbeing. The programmers succeeded in this manner as seen in participation rates within intervention

activities, visits to physicians, and early treatment for cardiac events. It could also be extrapolated that positive changes toward heart health would lead to positive changes in all other areas of life. This is a long-term perspective, but a valuable consideration for the future rational of community-based heart health programs.

3. HEALTH PROMOTION requires a long-term perspective to create awareness and build understanding of health determinants within organizations, communities, and individuals.

This principle is grounded within a Community Development approach which Coalfields' planners identified as integral to program planning. In keeping with this premise and the goals of CHHB, particular emphasis was on the building of individual awareness and the acquisition of skills aimed at enhancing heart health. Interventions were carefully developed to invoke behavior change maintenance by endorsing community involvement. There was also a strong drive to rely on local resources believed to lead to long-term maintenance and institutionalization of heart health promotion. Structural changes were integral and labeled within intervention strategies.

To maintain this perspective, support was essential. Fortunately, the CHHB developed out of interest stemming from the perspectives of the WHO and the Australian government. By doing so, the expanded the definition of health and the increased scope of health determinants was worked into program planning and maintained throughout CHHB program as an important expectation.

4. **HEALTH PROMOTION necessitates a balance between central and decentralized decision-making on policies that affect people's lives where they reside, in leisure, and work. There should be a strong emphasis on community benefits and citizen participation in problem posing and policy decision-making**

This principle states that there should be a strong emphasis on community participation in program decision-making. CHHB planners valued collaboration and partnership throughout all phases. However, the CHHB planners recognized the difficulty in recruiting active community members due to the cultural values placed on health. After two well-publicized town meetings, interested opinion leaders from the community were recruited for the steering committee. The goals and objectives of the program were outlined and other community members were recruited to participate in the implementation phase. This active participation and partnership with community members would allow for long-term benefits, funding, and community-oriented structural changes (Baum, et al., 1996).

5. **HEALTH PROMOTION depends on a degree of multi-sectoral involvement including support of the community, organizations, businesses, and policy sectors. It bases its practice in the need to have similar values and vision of a preferred future.**

Multi-sectoral cooperation was believed to be an integral part within the CHHB. The development of local, state, and national health goals had incorporated this principle in their involvement of numerous interested parties, including support form the WHO.

Specifically within the CHHB, the steering committee was comprised of community members, health professionals, and research people from the University. In the program as a whole, only limited collaboration was achieved with community-based organizations and business (i.e. rehab dept, grocers, restaurants, and clubs). However, within the school healthy heart project numerous connections were established and

maintained. This involvement would provide further justification and strength for the program leading to higher levels of support (i.e. extended funding and resources).

6. **HEALTH PROMOTION must draw on the knowledge from social, economic, political, medical, and environmental sciences as well as on experiential knowledge.**

The national perspective which guided the creation of health promotion programs was founded, in part, on this principle. It was created on the basis of knowledge drawn from those far beyond health-related services (i.e. university researchers, economists, etc.). The originating inspiration for the CHHB began with information collected regarding the significant impact of the medical, social, and financial costs of CVD. The steering committee was created to include representatives from a range of health-related services, research bodies, and lay people to ensure the inclusion of experiential knowledge. Implicit in the CHHB was the recognition of the interplay between the above stated factors in program intervention and strategy development. The CHHB 's use of theories, such as community activation and PMT, emphasized the value placed on this principle.

7. **HEALTH PROMOTION utilizes the concept of empowerment as an important strategy in achieving long-term changes and sustainability of programs**

CHHB used a *community activation* approach that embodied the concept of empowerment. This approach is grounded in mobilizing community involvement in all aspects of heart health program planning, implementation, and evaluation. Coalfields residents had a history of a grass-roots, bottoms-up community mobilization. This was especially noted in the initial formation of "Heart Support" during the 1980's when heart disease became a well known threat to numerous families. The people responded to this

"emergency" and took action. The CHHB planners hoped to capitalize on the strength brought by the residents to the program by involving opinion leaders from the beginning.

The initial request of the committee members was to perform a needs assessment. The results were very clear in depicting the value of health issues amongst the community members. From there it was also found that for interventions to be successful, local beliefs, social cohesion, and autonomy needed to be reinforced.

The interventions that specifically addressed this principle were the extensive media and public relations to raise the profile of heart health by infiltrating the social structures and enforcing the concept that each person has the ability to take control over the disease. A strong message that was reinforced was the importance of access to health services. This was later evaluated to be successful as the response to CVD symptoms brought people to hospital sooner.

Another intervention relating to empowerment was the resource center which helped to ease access by the participants to heart health information, support involvement, and help people to realize their strengths to take action against CVD. As well, certain interventions were geared to give people the skills, opportunity to practice them, and the structural support to maintain the behavior change.

The overall aim of the CHHB was to stimulate development of a self-sustaining community action group responsible for heart health. The interventions that were developed and the cooperation and support between community members and CHHB planners would help in the achievement of this goal.

8. HEALTH PROMOTION emphasizes public accountability for costs, activities, and effects

From program inception, involvement of the community and a strong evaluation focus was prioritized. Most importantly, the CHHB built on established structures from past health initiatives. There were several key examples of this: the needs assessment added slightly more information than past data collection methods, interventions were founded within existing structures, and past initiatives were enhanced under the guise of this program. The evaluation was most reliant on information collected during an earlier health promotion attempt at heart risk factor changes. This information provided for a database which permitted an evaluation of the true effects of the CHHB. Utilizing these pre-existing structural supports and information was a remarkably cost-effective way to emphasize program effects.

As well, within the subgroup initiatives (i.e. Healthy Schools), the eventual sustainability of the program was stressed. The school staff played an active role in the decision-making as well as implementing the interventions. Additionally, external agencies offered support and became strong advocates for the program. The evaluation was a remarkable success in quantifying the positive results that endured and projecting the future success.

9. HEALTH PROMOTION advocates healthy public policy.

To develop policy, widespread public awareness and consultation are necessary. At the heart of this process is empowerment of the community, their ownership and control of their own endeavors (Bracht, 1992). CHHB had many barriers to tackle including the traditional values amongst the people and the low socioeconomic status of

most residents. Although statistically some changes were seen, the program was a remarkable achievement in terms of carefully constructed media messages, strategically targeted groups, structural supports, and active involvement of the community.

It took strong policy to protect and promote initiatives within a state health system concerned with hospital functioning. Fortunately, Australia already had valuable players within all governmental levels that place a high priority on health promotion initiatives. With this kind of strong support from government (policy-makers), the incorporation of health promotion perspectives in the community based heart health projects was immanent.

Summary

The following tables depict the information gathered in the analysis contained in this chapter. Table 9 shows the degree to which health promotion principles were applied in the CHHB.

Table 9: Degree of Principle Usage in the Coalfields

	Consistently	Moderately	Little
Principle 1	✓		
Principle 2	✓		
Principle 3	✓		
Principle 4		✓	
Principle 5	✓		
Principle 6	✓		
Principle 7	✓		
Principle 8	✓		
Principle 9	✓		

The information suggests that CHHB utilized the health promotion principles on a consistent basis throughout program operation.

Table 10 indicates the nature of the principle application within the four phases of the CHHB.

Table 10: Coalfields Use of Health Promotion Principles Within Program Phases

Principles	Assessment	Planning	Implementation	Evaluation
Principle 1	✓	✓	✓	✓
Principle 2	✓	✓	✓	✓
Principle 3		✓	✓	✓
Principle 4	✓	✓	✓	✓
Principle 5		✓	✓	
Principle 6	✓	✓	✓	
Principle 7	✓	✓	✓	✓
Principle 8		✓	✓	✓
Principle 9	✓	✓	✓	✓

The above table portrays that the CHHB maintained a health promotion perspective throughout the program phases and that the health promotion principles were utilized consistently through the four phases.

Implications

Several striking implications evolved from this health promotion program. First, there was consideration given to the needs and values of the targeted population. The careful regard given to the people enabled the creation and operationalization of theoretically sound and successful interventions.

Second, since Australia had been a leader in health promotion initiatives, their priorities were to strengthening health promotion programs and eliminating duplication efforts. One strategy included the utilization of existing structures which would allow for the infiltration of heart health into the community.

Third, the National Health Strategy group was established in 1990 to refine and improve the Australian Health system. Their strategy made recommendations for improvements in funding, organization, delivery, and effectiveness of Australian health services including prevention and promotion. As part of this strategy, mechanisms were identified to achieve a more coherent program of action to promote better health nation-wide. This made significant contributions to health promotion activities, encouraged the development of health promotion skills, improved the associated administrative capabilities within a bureaucracy to support and develop health promotion, and secured funding for on-going program support. Together, these developments would ensure the continuation of heart health promotion as a priority.

Chapter Seven: Questionnaire Construction

Introduction

The research question was intended to determine the best fit of the health promotion principles within a heart health promotion program (Assessment, Planning, Implementation, and Evaluation phases). Along with this inquiry, an opportunity was given to the respondents to add their input of the necessary practical components of a successful program based in their experience. This chapter will address the methodology and issues related to questionnaire development.

Methodology

Due to the limited numbers of those considered experts in the field of heart health and the nature of the research question, it was felt that the two best techniques would be either an interview technique or a survey format. In considering these options, it was decided that the open-ended questionnaire type survey would be the best alternative for several reasons. A survey would allow for opinions about the objective state of the world and predictions of the future (Weisberg, Krosnick, and Bowen, 1996). The rationale for the questionnaire rather than the interview was that it was difficult to establish interview times over the long distance and via telephone. As well, this format allowed for the respondents to complete it on their own time and encouraged thoughtful responses. To counter problems of interpretation, a caveat was incorporated to be included during the initial recruitment that allowed me to contact the respondent with any questions or clarification.

Questionnaire Development

The questionnaire package included a cover letter, an executive summary of the study, and the questionnaire (See Appendices D, E, and F).

The intention of the **cover letter** was to outline the purpose of the thesis, including a brief description of the literature review (See Appendix D). As well, a section was included to describe the type of information which the questionnaire was designed to obtain and the "experts" role in the entire process.

The **executive summary** was designed to explain the principles of health promotion and the general phases of heart health programs (See Appendix E).

The **questionnaire** (See Appendix F) was developed to answer the research question:

What are the necessary health promotion principles in a successful community-based heart health promotion program which, if applied, could begin to effect positive changes towards cardiovascular health in Canada?

Due to the limited number of participants, a pilot study was done to ensure validity of questions and affirm the perceived importance of the information that would be generated through the questionnaire. The pilot process is described along with a summary of the results leading up to the development of the final questionnaire package in the following section.

Pilot Study

The pilot was designed primarily to ensure the readability, accuracy, and clarity of the questionnaire as well as invoke thorough responses from the pilot study respondents. The pilot was also intended to ensure the organization of the questionnaire was appropriate and amenable to enabling full participation by the study respondents. The chosen pilot group was from the Edmonton area.

The procedure involved an initial phone call to a list of ten potential people and six were enlisted to participate. The phone conversation included the identification of the researcher, a brief overview of the thesis, the study rationale, and the reason for the pilot questionnaire. The matter of the appropriate time commitment involved and the process to be followed was also established. This approach was chosen to entice participation and secure involvement. Those who agreed to participate are listed in Appendix G. Each of these individuals was currently in or considered to have vested interests in the heart health arena.

After the questionnaires were distributed, communication was maintained with the experts by fax, phone, meeting, or e-mail. The pilot study provided extensive feedback. Based on this feedback, modifications were made to the questionnaire and a new improved questionnaire was prepared.

Summary of Suggestions from the Pilot Study

After the feedback from the pilot group was received, the following points were found and subsequent changes were made. Interestingly, most participants also included their own personal insights into the questions as well as comments regarding the questionnaire itself.

- All felt the cover letter was accurate and concise;
- Most felt that the executive summary was sufficiently explicit to invoke responses without leading participants towards chosen answers;
- Most felt the principles were accurately stated with minor changes to wording or required a little more information in principle description; ,
- The Likert (1 – 5) scale initially used was not discernable between 1 versus 2, etc.;
- Generally it was felt that as an exploratory study, more in-depth answers were needed, therefore, the questions should be more open-ended; and
- To get more complete answers, the questions needed to be more specific in terms of the information sought.

The pilot group felt that the chosen group of experts had the potential to provide a wealth of information. There was consensus among the pilot members that by asking only "what is the importance of the principles", it would be very limiting in the amount of information I would receive and may lead to various interpretations by the readers. To fully evaluate the accuracy of principles and how they could *fit* into a program scheme, the following suggestions were made:

- The participants should be asked to state specific components/concepts that are important in any program that the reader has been involved with. This would help confirm information gained in the literature review to a certain extent.
- A ranking mechanism was suggested as a good method to force participants to commit to their answers and choose between items of almost equal value.
- A section dedicated solely to clarity and accuracy of principles should be introduced in a more open-ended format as opposed to a strict rating mechanism.
- To utilize the experts' knowledge fully, it was felt that the questions dealing with principles should allow them to include their own specific experience.

- Additionally, it was felt that for in-depth data collection, it would be more appropriate to encourage participants to translate their practical experience into the opportunity to express their ideal perceptions of heart health programs.

- Finally, the pilot group felt that to fully explore the incorporation of the principles, I should ask participants to place the principles within the phases of a program. This would enhance the value of the question as it would be directly related to the thesis question.

With these comments in mind, the questionnaire package was revised and the initiation of the formal data collection phase began.

The next section will discuss the issues of validity, sampling, and study group contact.

Issues

Validity

Validity can be defined as the ability of a question to measure the concepts that the question intends to measure (LoBiondo-Wood & Haber, 1994 and Weisberg, Krosnick, & Bowen, 1996). There are several kinds of validity that could be considered when developing a questionnaire. The following validity tests were done: content and construct.

First, **content validity** refers to a battery of questions intended to measure different aspects of the same concept (Weisberg, Krosnick, & Bowen, 1996). This was done by initially defining the concepts (i.e. health promotion and heart health) and identifying the dimensions that make up the concepts (i.e. principles and program phases). The pilot study ensured that the questions asked had meanings that invoked varying responses and allowed for all aspects of the phases of a heart health program as well as health promotion principles to be investigated.

A subtype of content validity is **face validity**, which verifies that the instrument seems to measure the appropriate concept on face value (Weisberg, Krosnick, & Bowen, 1996). The pilot study determined that the questions that were asked were limiting to this point therefore changes were made. Once reviewed a second time, the questions were found to have content validity.

Second, **construct validity** indicates how the concept being measured should relate to other concepts (Weisberg, Krosnick, & Bowen, 1996). This was done primarily through an extensive literature review that suggested very strongly the different phases involved in any program i.e., assessment, planning, implementation, and evaluation. Various components of the health promotion principles were also well established in the literature. The answers that the pilot group and the experts gave followed the accepted theory. Also, there were additional questions within the questionnaire that allowed for free thought and expansion on any general concepts that invoked thorough and insightful responses. Thus, this test for validity was also achieved.

A subtype of construct validity is **convergent validity** which states that measures of the same concept should receive similar answers and measures of different concepts should receive different answers (Weisberg, Krosnick, & Bowen, 1996). This was achieved by asking related questions for the same topic. Convergent validity was found to be appropriate in that the questions asked of the respondents were worded in such a manner that allowed for related answers between respondents and each question received different answers. Thus, this fulfilled the criteria of validity.

Sample

The sampling technique chosen was that of a **purposive** sample. This is a non-probability approach in which an elite group was chosen to participate (LoBiondo-Wood & Haber, 1994 and Weisberg, Krosnick, & Bowen, 1996). Underlying the value of purposive sampling is the principle that carefully selected experts are able to provide specialized insight into a selective research topic. In this case, the pilot group and the experts were representative of a purposive sampling procedure. The specialized knowledge of these individuals was deemed essential to the task of determining the validity of the principles which were identified after a thorough review of the literature. Such a sampling method, though, enhances the validity of the response patterns as a consequence of the high level of knowledge brought by the respondents.

One expert from each province was chosen to participate. The experts ranged in positions from principle investigators, directors, chief medical officers, or professors - all of whom were currently involved in Canadian Heart Health initiatives. However, Quebec was excluded due to the language barrier and in the North there were no direct initiatives for heart health. All people were approached initially, seven of ten were successfully recruited to participate. The list of participants can be found in Appendix H.

Expert Participation

The process was completed in much the same manner as the pilot. An initial phone call was made to elicit participation, the package was faxed, and follow-up phone calls were made. The manner in which the completed questionnaires were received were mostly by fax and one telephone interview.

Method of Analysis

The method of analysis proved to be complex in that the original research question required several variables to be considered i.e. principle accuracy, principle fit into program phases, and the practical components. What was found to be the best organization for the data was the juxtaposition of the questionnaire sections – principle validity, the fit of the principles within the program phases as compared to the three past heart health promotion programs, and the practical components necessary to consider when designing a health promotion program as compared to the three past programs. There would be three parts to the analysis.

The first part consisted of a discussion regarding the accuracy of the principles. This would provide the foundation for the thesis from which the ensuing literature review and analysis were completed. All the information was compiled and any modifications to the principles that were deemed necessary were done. However, any subsequent analysis continued to use the original versions of the principles, as this is what the original literature review was based upon.

The next part consisted of discovering how the principles might be incorporated into the development of a successful heart health promotion program. It involved asking the respondents to place the principles into the phases that they thought the principle would be most significant to consider within. This information was then compared to the assertions from the historical analysis of the three past heart health programs.

To further qualify this information and add a practical component to the development of a heart health promotion program, opportunity was given to the respondents to suggest necessary and practical concepts within program development.

Additionally, a question was asked of the respondents as to how they would incorporate the principles when creating a health promotion program. Together this information added relevance and application potential for future use of the information collected from this thesis.

The discussion chapter consisted of a compilation of all the collected data. The invaluable contribution of the past along with the contribution of current perspectives would be incorporated in the future development of heart health promotion programs. As well, key suggestions were stipulated which, if followed by future heart health promotion programmers, could help to produce a functional community-based program capable of inciting positive changes in cardiovascular health. The combination of these methods and procedures was specifically formulated to answer the question:

> **What are the necessary health promotion principles in a successful community-based heart health promotion program, which, if applied, could begin to effect positive changes towards cardiovascular health?**

Chapter Eight: Part One

Analysis of Health Promotion Principles

Introduction

The analysis of the health promotion principles included four sub-questions. The first question asked if the principle was accurately stated based on their experience and my description in the Executive Summary. If the answer was *no*, then the next question asked what would need to be modified. Following this, the third question inquired as to *what extent* the principle had been incorporated into the health promotion programs with which the respondent had been involved. The last question asked how might this principle be incorporated into a future successful health promotion program.

These questions were based on the desire to delve into the preciseness of the principle in the way it was worded and how the respondents interpreted it. They also had the opportunity to expand or comment on the principle. The next two questions were asked to discover how the principle was and could be utilized. This was primarily based within the experience of the principle investigator's (respondent's) experience. This ultimately would allow for information into the organization of programs and reveal potential strengths and weaknesses in current health promotion programs.

This part will focus on the first two portions of section C – the accuracy of the wording and subsequent interpretation. Any modifications to the principles were summarized at the end of this section. However, all subsequent analysis regarding the fit of the principles into heart health promotion programs was done according to the original statements.

Principle 1

Health Promotion recognizes individual, social, and environmental factors interacting to influence health.

Lalonde (1974) was one of the first to declare that the concept of health was more than the absence of disease, rather it was the interaction of three elements, individual, social, and environmental, that served as a resource to assist people in achieving positive health and well-being. This concept was further asserted by documents such as the Ottawa Charter (1986) and the Action Statement for Health (1996). Together, these papers contributed to the formation of health promotion strategies.

This principle was developed and placed as number one in order to ascertain the groundwork necessary in the development of health promotion programs. With the proper perspectives and a common understanding of the goals and vision of the program, all players will be able to work together to achieve a successful health promotion program. Cardiovascular disease risk factors are determined by behaviors shared by individuals and which are learned in a broad social environment (Pardis, et al., 1995). It was the realization of the intertwining of these elements that served as an integral part of the health promotion movement. This is a critical perspective in the establishment of a strong foundation for heart health programs.

Five of the seven respondents felt that this principle was accurately stated. The modifications thought to be necessary in order to elucidate the concept implied within principle one were twofold. Respondent G thought that health promotion draws on ***how*** individual, social, and environmental factors interact to influence health rather than simply recognizing that they do, in fact, interact to influence health. Respondent E felt that this principle was general and perhaps redundant in that it was too much like

principle two (holistic) and incorporated components of principle seven (empowerment). The suggestion was made to either combine ideas more clearly into the other two principles or more clearly delineate the concept of factors interacting to influence health.

Based on the documents from which the principles were formulated and that the majority felt that the principle was accurately stated as is, no changes will be made for two reasons. The principle was adapted from the document *Strategies for Population Health* (1994) and was found to provide a consistent, rational basis for setting priorities, establishing strategies, and making investments in actions to enhance health outcomes and measure progress (Federal Advisory Committee, 1994).

Additionally, these are three broad factors that will serve to direct team members perspective and allow for deeper interpretation whilst creating the program. Outlining these three factors is neither limiting nor all encompassing. Rather, when discussing individual traits, it permits the inclusion of issues such as knowledge, behavior, and attitude. All of these factors interact to varying degrees in the sphere of health promotion and heart health. Environmental factors include one's home, work, and community whereas the social factors include support and relationships, all of which are critical for successful heart health promotion programs. This principle will help to articulate the depth of the interactions while allowing for specific identification of the health challenges facing the target population (Ottawa Charter, 1986).

Principle Two

Health promotion supports a "holistic" approach in which the physical, mental, social, ecological, cultural, and spiritual aspects of health are recognized.

One definition of health promotion is that it is the process of enabling people to increase control over and improve their health (Center for Health Promotion, 1992). Health is defined as a state of complete physical, mental, and social well-being (WHO, 1986). The crux of this principle is the concern not only with one's physical functioning, but also with their experiences of well-being in terms of happiness, meaning, and purpose. This is where the specifically delineated determinants of health become incorporated. The document *Strategies for Population Health* (1994) outlined education, social support networks, income, employment and working conditions, physical environment, biology, personal health practices and coping skills, healthy child development, and health services as those factors that contribute to the health of people. Therefore, it is the incorporation of these factors that allow a health promotion program to become comprehensive and individuals to enhance and achieve health. This is why this health promotion principle is critical in forming the basis for heart health programs.

Five of seven believed this to be an accurately stated principle. However one of the five, Respondent C, felt that it was too general. The comments from the respondent indicated that the statement, left as it was, would lose its' strength in meaning and therefore, required elaboration. Respondent E, who felt it was not accurately stated, also suggested elaboration of the term *holistic* and noted that it should include the idea of a "multi-factoral etiology" of health problems. However, the principle already indicates the recognition of physical, mental, social, ecological, cultural, and spiritual aspects of

health. The Respondent G indicated that the principle, as stated, implies that health promotion uses a holistic *approach* while in the respondent's experience health promotion has also evolved to be an end in itself. It was felt that for health promotion to be more holistic, a broad spectrum of outcomes need to be defined and measured as part of the final evaluation.

Based on the comments, the principle was modified to state:

Health Promotion supports a holistic approach in which the physical, mental, social, ecological, cultural, and spiritual aspects of health are recognized *as components of a multi-factorial etiology and effected in the pursuit of health.*

This modification will not change the meaning of the principle, but allows for further elaboration for heart health promotion program planners. It includes aspects of the accepted definitions of health and health promotion and suggests that by modifying several factors (i.e. determinants of health) it will serve to assist individuals and groups in the enhancement and achievement of health. Despite that the majority of respondents felt that the principle was accurately stated, it was determined that the additional component enhanced the practicality and operationalization, and therefore use, of the principle.

Principle Three

Health promotion requires a long-term perspective. Time and support are necessary to create awareness and build understanding of the health determinants within individuals, communities, and organizations.

This third principle envelopes the concepts within the first two principles and works an expanded definition of health, health promotion, and health determinants into individuals, the community, organizations, institutions, and the political arena. To maintain health promotion as an approach to enhancing and achieving health and

wellbeing, support is needed to ensure the success of community-based heart health promotion programs. In order to accomplish this, a strong commitment must be made by supporters and developers of health promotion programs in terms of the resources that are required to generate long standing effects and long-term perspectives (often greater than the original timeline from which financial support is obtained). Achieving the full benefits of health promotion require long-term timelines. Doing so will allow objective proof that health promotion is the best way in helping people enhance health. As well, positive health perspectives can be built into the value system and lifestyle of society only through perseverance of time.

Five of seven felt that the principle was accurately stated. One of the five, Respondent F, felt that while the principle *per se* was accurately stated, in the real world of limited funding, sufficient resources will not be available to completely evaluate, over the long-term, the impact and/or implications of the health determinants on individuals, communities, organizations, etc. Therefore, the impact of the health promotion programs may not be fully realized. Respondent E felt that from a funder's standpoint, or a population outcomes point of view, the second part of the principle was incomplete. A long-term perspective is necessary because this is an investment in future health and designers should not expect immediate results, particularly with respect to the avoidance of illness or death. The idea, then, is that because a long-term perspective is necessary to identify effect on outcome, long-term resources must be applied over an extended period of time. Resources imply funding, personnel, equipment, and policy support. Respondent G felt that the principle needed to emphasize the extensive investment in community mobilization, organization, and skill building (capacity development). These comments

are similar in that they suggest an emphasis in meaning, but offer no specific suggestions for change.

Based on these comments, the principle was modified to state:

Health Promotion *represents* a long-term perspective *that requires* support and time to create awareness and build understanding of the health determinants within individuals, communities, and organizations.

Also, the importance of the continued, long-term support from funders will be built into the description portion of the principle. Evaluation is a necessary cost in order to completely determine the effectiveness of health promotion programs and ultimately the goal of health promotion – enhanced health. Additionally, the individuals, communities, and organizations must realize the same and to do this, the concept of long-term commitment must be incorporated into the health promotion program. This small change allows for clarity and enhanced meaning of the principle.

Principle Four

Health promotion necessitates a balance between central and decentralized decision-making on policies that affect people's lives where they reside, in leisure, and work.

This principle is firmly grounded within the perspective that there should be a strong emphasis on community benefits and public participation in problem posing and policy decision-making. There is a particular focus on using the expertise and resources available from professionals, but health promotion programs must also involve people at the community level in a fuller and more participatory manner (Bracht, 1992). A priority of health promotion is to strengthen community action so that the community has the capacity to set priorities and make decisions on issues that affect their health (Hamilton &

Bhatti, 1996). The most effective method for health promotion activities relies on the coalition of the people and groups in the community.

Four of seven agreed that the principle was accurately stated. Respondent D stated that the principle was not clear, but did not offer any suggestions. Respondent G felt that it was not that a balance was achieved, but rather ensuring the needs and aspirations of both are considered in the decision-making process. Respondent E felt that the first impression of the principle is that it describes the shift of the decision-making closer to the persons being affected, but that the description indicates collaboration, shared governance, or distributive justice.

Therefore, based on the above comments, this principle was modified to state:

Health Promotion necessitates a *collaboration and participation* between central and decentralized decision-making on policies that affect people's lives where they reside, in leisure and work".

Altering the word *balance* to *collaboration and participation*, will serve to specify that the intent of the principle was to ascertain a collaborative and participatory element to the development of a health promotion program.

Principle Five

Health promotion depends on a degree of multi-sectoral involvement including support of the community, organizations, businesses, and policy sectors. It bases its practice in the need to have similar values and vision of a preferred future.

Health becomes the concern not only of the individual, but also becomes the responsibility of the community sectors of which they are a part. There is an increasing realization of the need for inter-sectoral cooperation at all levels (Cunningham, 1992). It is essential that all players take a leadership or partnership role in the particular actions

that best fit with their mandate, interest, ability, obligations, and sphere of influence (Canadian Public Health Association, 1996).

Understanding the effects and impacts of the costs of cardiovascular disease (in life lost, disability, and health care costs) each sector has an important role to play in halting this disease and subsequently enhancing health and wellbeing. To have the potential for significant impact on the health of the population, comprehensive inter-sectoral health initiatives must be developed (Hamilton & Bhatti, 1996). This collaboration across the sectors and in conjunction with the active support of general public is essential for the success of these health strategies.

Four of seven agreed that the principle was accurately stated. Respondent A felt that similar values and vision are not always practical or necessary except maybe in a more short-term nature i.e. community program goal. Respondent G felt that health promotion is *supported by* not *dependent on* multi-sectoral involvement. Rather, the nature of the involvement must match the issue and environment. As well, the respondent felt that one could conduct health promotion within any organization (i.e. the workplace) and that it often begins small and builds to be more inclusive. Respondent E felt that clarification was necessary in order to determine whether it was multi-disciplinary ("shared, over-lapping scopes of practice among disciplines") or inter-disciplinary ("different disciplines working together but staying strictly within their area") that was referred to with the term *multi-sectoral*.

Initially, the term multi-sectoral was used interchangeably with inter-sectoral. The general perception found in the literature from which the principle was derived, indicated that there is the need for coordinated action between and within other sectors to ensure

support for heart health initiatives (Hamilton & Bhatti, 1996, Federal Advisory Committee, 1994, and Epp, 1986). In these terms it is important to recognize that the most important consideration in the creation of a successful heart health promotion program is the active involvement and collaboration of all critical stakeholders. The stakeholders include the community, organizations and businesses, and policy sectors. The community is critical in identifying their needs and taking action to control their health as well as being responsible for instituting changes in their health behaviors. The organizations and business are important in the support of heart health initiatives (i.e. creating social and physical environments conducive to supporting healthy behaviors) as well as responding to the needs of the community (i.e. providing low-fat food products). The policy sectors have a vested interest in the health of the population (i.e. healthcare and disability costs, mortality/morbidity statistics, etc.), therefore, it is evident that policies help to support community action and provide the opportunities to maintain healthy behaviors. Rather than struggling with the semantics of *inter-* versus *multi-* it was more important to recognized that the active participation and involvement amongst interest groups, whether they are from differing scopes of disciplines or from various disciplines, are required to ensure on-going support and ultimate sustainability of health initiatives. The concerted effort to form alliances across sectors can advocate for change on the broad determinants of health (Canadian Public Health Association, 1996). Therefore, no changes were made in the statement of this principle. The next principle addresses the concern of utilizing various levels of expertise to ensure the skills necessary to identify and create the collaboration across and within sectors.

Principle Six

Health promotion must draw on knowledge from social, economic, political, medical, and environmental sciences as well as on experiential knowledge.

Health Promotion and Heart Health Professionals and academics from various disciplines, are called upon to build bridges both within their own community and outwards towards the private, public, and voluntary sectors (Health and Welfare Canada, 1989). Health promotion advocates the combination of educational, organizational, economic, and environmental support for actions conducive to health (Bracht, 1992). This merging of perspectives allows for an integrated approach to health promotion. Further, this will assist in the move towards choosing strategies conducive to enhanced health.

All respondents felt that this principle was accurately stated. Respondent C felt that psychology could be added as a term of reference. Respondent E noted that this principle was not significantly different from principle five. However, whereas principle five suggests the benefit and use of different groups, this principle addresses the issue of from which knowledge areas these groups should be drawn. Specifically, it focuses on the importance of specialized content areas from which essential components of health promotion programs are based. Given these comments, the principle remained as stated.

Principle Seven

Health promotion utilizes the concept of empowerment as an important strategy in achieving long-term changes and sustainability of programs.

The new health promotion movement places an emphasis on empowerment as a primary health promotion strategy. Empowerment in health promotion is often defined as a process of helping people assert control over the factors which affect their health and to

enhance people's belief in their ability to change their own lives. (Airhihenbuwa, 1994). This suggests the notion of partnerships between professionals and the community. This is accomplished by providing access to information, supporting community leadership in decision-making practice, and assisting people in overcoming obstacles (Center for Health Promotion, 1992, Robertson & Minkler, 1994, and Airhihenbuwa, 1994).

Community development is an effective vehicle by which health promotion may take place - whether it is directed at policy, environment change, institutional change, or personal skills development. At the heart of this process is *empowerment*, where communities take ownership and control of their own endeavors and destinies. Concrete and effective community action in setting priorities, planning strategies, and implementing them to achieve better health will theoretically foster the long-term maintenance or institutionalization of health promotion programs (Paradis et al., 1995 and Green & Raeburn, 1988).

Five of seven respondents felt that this was accurately stated. One of the five, Respondent C, stated that sustainability and time are two factors that are required to achieve this. Respondent G stated that the concept was accurate, but that empowerment was a goal not a process. It was felt that empowerment required a "learning environment to facilitate growth and development of a community". The literature suggests that empowerment is used as a strategy (Robertson & Minkler, 1994). It does imply a learning environment to facilitate growth and development of a community, but that this in itself is the process of empowerment. It describes the role of the health professional as an enabler in the process who is assisting people to articulate their health concerns and

identify solutions. How this is accomplished is well documented (Labonte, 1992, Centre for Health Promotion 1992, Robertson & Minkler 1994, and Airhihenbuwa 1994).

The intent of this principle was to specifically state the use of empowerment as a critical health promotion strategy. Given the interesting feedback and general agreement of the principle, no changes were made.

Principle Eight

Health promotion emphasizes public accountability for costs, activities, and effects

In times of fiscal constraints, the effectiveness of health initiatives must be quantitatively and qualitatively supported in order to assure the continuance of scarce resources and funding. The importance of developing comprehensive evaluation methods is emphasized as an integral component of the health promotion program. Eventual sustainability of the program will be needed as experts withdraw from the program and program operation continues through community leadership. Greater public understanding will be needed to provide the foundation for public participation in the setting of priorities (Federal Advisory Committee, 1994). This will ensure public accountability with respect to the effective use of all resources provided for the creation, operation, and maintenance of the heart health promotion program

Five of seven respondents felt that this statement was accurately stated. Respondent A felt that realistically, it is difficult to document effects and that a definition of what would constitute accountability in the context of health promotion is needed. Respondent G stated that the principle was not accurately stated, but did not offer suggestions as to what would make the principle more clear. One comment was that to be

credible health promotion efforts must account for and report costs for specific activities and outcomes/impacts on target population. This was an integral component of the intention embedded within the principle. The actual operationalization of the accountability process would remain within the responsibilities of the individual program planners. With these considerations, the principle wording remained the same.

Principle Nine

Health promotion advocates healthy public policy.

Policies shape how resources influence society and affect the determinants of health. To date, most policies in the area of health have supported healthy lifestyles (Canadian Public Health Association, 1996). The rationale behind the strategy of coordinating healthy public policy is the belief that public policies, in general, act as incentives or disincentives to health (Health and Welfare Canada, 1988).

Healthy public policy is distinguished from traditional medical care policy by being ecological in perspective, multi-sectoral in scope, and participatory in strategy (Health and Welfare Canada, 1988). The health promotion approach espouses the belief that communication on health issues and the creation of structures to facilitate the process of policy development are of utmost importance.

Six of the respondents felt that the principle was accurately stated. Respondent G felt that the statement would seem to contradict health promotion as an entity in itself – specifically where health promotion is seen as a process. The literature suggests that proponents of health promotion use advocacy to influence public policy so that it positively influences the health of the population. The intent of the principle was to suggest that a comprehensive health promotion program would actively support and

encourage healthy public policy changes. Health promotion advocates for healthy public policy because policy influences the determinants of health and encompasses the scope of health and health promotion elements. Given the comments and considerations, the principle remained as stated.

Summary

In summary, the following modifications were deemed necessary in order to place added emphasis to enhance the clarity of the principle.

Principle One – No change

Principle Two – added the phrase *and affected in the pursuit of health*. This would allow for elaboration and inclusion of the definitions of health and health promotion.

Health Promotion supports a holistic approach in which the physical, mental, social, ecological, cultural, and spiritual aspects of health are recognized *and affected in the pursuit of health.*

Principle Three – the changes that were suggested led to clarification of the principle in terms of emphasizing the concepts of timing and support.

Health Promotion *represents* a long-term perspective *that requires* support and time to create awareness and build understanding of the health determinants within individuals, communities, and organizations.

Principle Four – The change made was to clarify the intent of the word *balance*.

Health Promotion necessitates a *collaboration and participation* between central and decentralized decision-making on policies that affect people's lives where they reside, in leisure and work".

Principle Five – No change

Principle Six – No change

Principle Seven - No change

Principle Eight - No change

Principle Nine - No change

Six of the nine principles required no changes as a result of the survey of the heart health promotion experts. Of the remaining three, the revisions did not alter the fundamental meaning of the principle. Rather, the comments served to exemplify the underlying intention and allowed for enhanced definition of the principles. As well, some experts offered suggestions that added a working dimension to the principle. In all, the comments received from the respondents were interesting, positive, and perceptive. They helped to add insight into further development and usage of these health promotion principles in the development of a heart health promotion programs.

Chapter Eight: Part Two

Organization of Principles Into Program Phases

Introduction

The following section is comprised of an analysis of the principles and their placement into the four program phases - Assessment, Planning, Implementation, and Evaluation. This examination will consist of a discussion regarding the information collected from the literature review of the heart health promotion programs in North Karelia, Pawtucket, and Coalfields and comparisons will be made with the commentaries provided by the seven Canadian respondents. This culminates in the organization of the principles and the associated emphasis into the four phases of a program design.

In order to facilitate understanding within this portion of the analysis, refer to:

- Appendix E for an executive summary of the health promotion principles (or Chapter 3 for complete descriptions) or Appendix B for a list of the health promotion principles.
- Appendix I for a Table depicting a summation of North Karelia's, Pawtucket's, and CHHB's usage of the principles within the program phases.
- Refer to Appendix J for a table portraying a complete synopsis of the results of the comparison between the respondents' perspectives and the information collected from the analysis of the three past programs.

Note that throughout this chapter a summary of results in the form of succinct tables will be provided at the end of each section for on-going comparison between phases and the responses of the experts as compared to the data collected from the three past programs (Refer to above Appendices).

Assessment

The assessment phase involves various components. In general, initial steps are selection of a community organization-type strategy. This may include a community analyses which entails collecting pertinent information regarding the target group (i.e. needs assessment or community diagnosis involving learning the community's health behaviors, health needs, etc), statistics, and resources (Proceedings, 1988, Shea & Basch, 1990, Brown, 1991, Elder et al., 1993, and Mittlemark et al., 1993). The identification and recruitment of participants from community leaders may be a consideration at this point (Elder et al., 1993 and Mittlemark et al., 1993). It may also involve outlining general goals. This phase ultimately sets the stage for program planning.

* Refer to Appendix J for a table of the summary of results for principles one through nine used in the assessment phase.

Principle One

Health promotion recognizes individual, social, and environmental factors interacting to influence health.

All programs (North Karelia, Pawtucket, and CHHB) and the majority of respondents (5 of 7) indicated that this principle was critical to the implementation of the assessment phase. It had been widely recognized that an individual's health and the subsequent health of the community were reliant on the interaction between the individuals that comprise the community and their connection with the social and physical environment which shape their behaviors and the choices they make regarding their health (LaLonde Report, 1974, The Framework, 1986, Ottawa Charter, 1986, and Canadian Public Health Association, 1996). This underlying perspective, especially in

regards to heart health, had been well documented (Proceedings, 1988, Elder et al., 1993, Mittlemark et al., 1993, Pardis et al., 1995, and Bracht, 1999).

North Karelia was remarkable in its organization. In 1971, the interaction of these elements - individual, social, and environment - had not yet been specifically outlined. However, the planners utilized this understanding when implementing their assessment of the community. Pawtucket, as well, performed an extensive assessment of the community. The program was strongly based in theory and relied on the constructs of the social learning theory as well as on community activation. Both of these approaches had as their basis the premise of the above principle – that a deterministic relationship existed among the individual and their environment. CHHB utilized the protection motivation theory which attempted to explain the cognitive processes associated with behavior change. This theory was grounded, to an extent, within the assumptions of this principle.

The majority of expert respondents (5 out of 7) stated that this principle was important to consider in the assessment phase. Their determination might be attributed to past program successes and the influences that theory has had on behavior change strategies. The experts recognized the significance of the interaction of these factors which would assist the program planners to develop strategies and organize the program to achieve the greatest successes.

Based on the above data, there was a strong emphasis of this principle found in the assessment phase. Cardiovascular disease (CVD) was associated with multi-factoral risk factors, therefore in order to effect and maintain changes the above elements need to be considered in a heart health promotion program. There are currently many well-known and approved theories that are primarily founded within the premise of this principle –

interaction of the individual with their social and physical environment (Shea & Basch, 1990, Hyndman et al., 1993, and Canadian Public Health Association, 1996). Integrating this principle into the assessment phase was considered to be crucial to program success.

Principle Two

Health promotion supports a "holistic" approach in which the physical, mental, social, ecological, cultural, and spiritual aspects of health are recognized.

This principle proposed an expansion of the meaning of health. It suggested that health was not solely the absence of disease, rather the experiences of wellbeing contribute and effect one's experiences and choices in health (WHO, 1986). The program that most built upon this principle was the CHHB wherein the designers determined that given the obvious inequalities of health, other daily life concerns, such as feelings of safety and security, contributed to general feelings of health and wellbeing. This would impact the manner in which the program would be marketed and the way interventions were addressed.

In comparison, the majority of respondents (4 of 7) felt the premise of this principle was also important to maintain from project initiation in the assessment phase. The specific demarcation of the broader *determinants of health* was carried out during the 1990's when it was determined that health was a complex inter-relationship between many different factors (Mustard & Frank, 1991 and Hamilton & Bhatti, 1996). Given the combination of these issues – the determinants of health, the literature that suggested a comprehensive definition of health, and that these factors together play a role in the determination of health and wellbeing - the respondents agreed that several factors needed to be considered when establishing the assessment of a program.

It would seem appropriate to recommend that although this principle provides pertinent information to thoughtfully consider during the assessment phase, the principle would *not* be actively assessed unless otherwise indicated by the program designers. The value that this principle could contribute to the assessment phases is the significance that the target community places on heart health issues. Conceivably, there could be other issues that remain more compelling (i.e. high unemployment, crime, pollution, etc.) that might impede operation of the program. These factors may need to be taken into consideration.

Principle Three

> **Health promotion requires a long-term perspective. Time and support are necessary to create awareness and build understanding of the health determinants within individuals, communities, and organizations.**

Although this principle had valuable information to offer (i.e. the concepts of community activation or community development), neither the past programs nor the respondents thought it to be critical to consider when assessing the target group. This could likely be attributed to the fact that although this principle would be important in securing support for the long-term, in regards to community assessment it was more appropriate to become cognizant of present prevailing community norms. The premise of this principle would become more pertinent in later phases.

Therefore, despite the valuable assertions that this principle suggests, the assessment phase is not where the principle should be implemented.

Principle Four

Health promotion necessitates a balance between central and decentralized decision-making on policies that affect people's lives where they reside, in leisure, and work.

This principle proposed that there should be deliberate action to involve the community to achieve balance between the centralized experts and de-centralized groups with respect to the decision-making process. The active pursuit and identification of needs would create the necessary foundation for a successful heart health promotion program (Bracht, 1992). Interestingly, all of the past programs utilized this principle to varying extents in this phase compared to two of the respondents (2 of 7).

The programs, whether initiated from the community itself (North Karelia) or experts (Pawtucket and CHHB), involved public participation of community leaders (including local businesses and organizations) at this phase. This group together decided which elements would be important to assess prior to designing the remainder of the program.

The majority of expert respondents (5 of 7) did *not* include this principle in the assessment phase, but did think it was critical in other phases. This could be attributed to the fact that the respondents felt that they have the necessary background knowledge (or included those who have) to discern factors important to be assessed. Once the data had been collected, it would then become a priority to involve others in the decision-making process for the planning of the program.

Due to the above assertions, it can be suggested that incorporating this principle is particularly program specific. The past programs seemed to utilize the principle

throughout, whereas the experts did not seem to feel that this was important to consider entirely at this phase.

Principle Five

> **Health promotion depends on a degree of multi-sectoral involvement including support of the community, organizations, businesses, and policy sectors. It bases its practice in the need to have similar values and vision of a preferred future.**

This principle purported that it was essential that stakeholders take a partnership role in the particular actions that best fits with their mandates, interests, ability, and sphere of influence (Canadian Public Health Association, 1996). This collaboration would ensure the development of comprehensive health initiatives.

In this case, the respondents (4 of 7) included this principle as a priority in the assessment phase whereas the past programs created these relationships in other phases or prior to the assessment phase. The respondents agreed and the literature suggested that establishing collaborations and partnerships early on in the design of a health promotion program would lead to positive changes in heart health and more effective intervention strategies (Paper on Population Health, 1994 and Canadian Public Health Association, 1996).

Based on the above data, this principle could be considered as being a significant component of the assessment phase. Though the past programs did not incorporate these ideas within the assessment, this principle was particularly emphasized in the following phases. It has been well documented that CVD effects the nation on numerous levels. Each sector has an important responsibility in arresting this disease and subsequently enhancing health and wellbeing (Paper on Population Health, 1994). By involving multi-

sectors in the assessment phase, it is possible to assure that the needs of all stakeholders will be addressed.

Principle Six

Health promotion must draw on knowledge from social, economic, political, medical, and environmental sciences as well as on experiential knowledge.

Health promotion advocates for the combination of strengths from various disciplines which increases the likelihood of support for program initiatives (Bracht, 1999). All of the programs utilized the current available knowledge as compared to three of the respondents. North Karelia was a pioneer in piloting the combination of knowledge from the fields noted in the principle that later translated into theories and assumptions. The assessment included comprehensive risk factor components as well as various other aspects (i.e. environmental and health services orientation). The planners were intuitive in assessing the various determinants as there were really no available theories or hypothesizes to guide them at the time. On the other hand, Pawtucket was firmly grounded in the assumptions of comprehensive theories, which ultimately dictated the manner in which the assessment was conducted. CHHB was different in that the project initiation evolved mainly from governmental interest. The mandates devised by the governmental agencies had evolved from the involvement of various knowledge basis in order to provide for appropriate and integrated approaches to health programs. Given this, the assessment done by the CHHB was strongly based in theory and this was evident in the comprehensive information that was collected.

In comparison, only some of the respondents (3 of 7) felt that it was important to be cognizant of this principle during the assessment. However, the majority felt this principle was more prudent to apply in the planning phase.

Given the above data, principle six can be deemed as a moderately valuable component of the assessment phase. This conclusion can be related to the fact that addressing heart health concerns from a comprehensive and multi-factoral perspective had previously been evaluated to incur more positive results. To ensure that all factors are considered and the assessment is comprehensive, a vast knowledge base must be utilized.

Principle Seven

Health promotion utilizes the concept of empowerment as an important strategy in achieving long-term changes and sustainability of programs.

As a process of helping people assert control over the factors which affect their health, *empowerment* suggests the notion of partnership between the experts and the community (Airhihenbuwa, 1994 and Robertson & Minkler, 1994). Empowerment could be considered a relatively new term and, therefore, there was no clear evidence that the past programs explicitly incorporated this perspective. However, North Karelia followed an empowerment strategy in that the initial drive to address the concerns of CVD was partially initiated by the community and they were, to an extent, involved in the assessment phase. Pawtucket, although expert driven, utilized this principle in multiple ways. However, in the assessment phase, they did not explicitly incorporate this concept. The CHHB utilized an approach that was also embodied within the concept of empowerment and used interested lay members to help create the assessment.

The majority of expert respondents (4 of 7) agreed that this is a critical component in the assessment phase. Supporting any action made by the community itself would ultimately lead to long-term changes and sustainability of the program (Paridis et al., 1995). Though, the past programs utilized the concept of empowerment inadvertently, the respondents regarded this principle to be more advantageous if incorporated initially from the assessment phase. As part of the assessment, determining the ability of the community to take control over their own endeavors would lead to concrete and effective community action (Green & Raeburn, 1988).

This principle is an imperative strategy to undertake in the assessment phase. It would allow for appropriate identification of community needs and determine the perceived importance of health concerns. By creating these early alliances with the community, it would ultimately strengthen the capacity of the program.

Principle Eight

Health promotion emphasizes public accountability for costs, activities, and effects.

In times of fiscal constraints it is imperative to ascertain resources and funding through the demonstrated effectiveness of programs. However, neither the past programs nor the respondents thought this principle was important to consider in the assessment phase. This principle would not be considered as valuable to use in the assessment phase.

Principle Nine

Health promotion advocates healthy public policy.

Public policy serves to act as incentives or disincentives to health (Health and Welfare Canada, 1988). Both North Karelia and the CHHB considered the effects of current health policies in the assessment phase. North Karelia realized that the reorganization of health services was necessary in order to support initiatives. CHHB was initiated on the basis of past government health policy proposals. Consequently, this phase included an assessment of the various policies which focussed on health issues. Pawtucket made no specific reference to assessing the policies affecting the program, but later evaluations suggested that the demand for policy changes increased.

The respondents (5 of 7) did *not* suggest that that policy changes should be considered at this stage. Even if not specifically an assessment priority, a long-term outcome and goal of health promotion programs is to create healthy public policies so as to encourage the maintenance of healthy behaviors (Bracht, 1992).

Due to the suggestions extrapolated from the use in past programs and the responses from the experts, this principle was not considered as valuable in the assessment phase. Of importance is to recognize the underlying effects that policy has on an individual and the community in which they reside. Only once the program was secured in operation and eliciting positive results, could the development of healthy public policy be incorporated.

Summary

See Table 11 for a summary of results as outlined in the preceding section.

Table 11: Summary of Results

Organization of Principles Into the Assessment Phase - Experts' Responses Compared with the Past Programs

ASSESSMENT		
Principle	**Experts**	**Programs**
1	5/7	3/3
2	4/7	CHHB
3	0/7	0/3
4	2/7	3/3
5	4/7	0/3
6	3/7	3/3
7	4/7	NK, CHHB
8	0/7	0/3
9	2/7	NK, CHHB

In general, the specific principles to be integrated into the assessment phase were **principles one, five, six,** and **seven**. ***Principle one*** was considered as critical. Many theories have been developed and verified through rigorous studies suggesting that an individual cannot sustain behavior changes without the proper supports in the social and physical environment. The assessment phase should consist of determining the extent and types of support available. ***Principles five*** and ***six*** were considered to be important. CVD

is a multi-factoral disease and therefore the best way to tackle the associated risk factors is to involve those sectors that have the vested knowledge and interests. In doing so, program designers can develop interventions and strategies that are meaningful to the stakeholders while effecting the elements that interact to influence health. Given the newest developments in the concept of empowerment, ***principle seven*** was also viewed as integral during this phase. Ensuring that community involvement was stressed helped to strengthen the capacity of the community in their identification of needs and ultimate support for initiatives.

To a lesser extent **principles two, four**, and **nine** should be considered. The use of these principles is program specific and is dependent on the overall goals of the program. As discussed, ***principle two*** was seen as more important as an underlying consideration which should be maintained throughout program design. The extent to which ***principle four*** was utilized at this phase was dependent on the initial demand for the program (i.e. grass-roots or expert-driven). Realizing the importance of invoking a partnership between the experts (central) and community (de-centralized) will ultimately lead to program success. ***Principle nine***, as well, was a component suggested to be more valuable to consider in other phases. However, it is important to realize the underlying effects these policies have on the health of the community. The respondents did not factor this into assessment phase due to the practical concerns of limited funding, time, and resources to fully explore these effects, Rather, this principle evolves out of the program as changes are demanded by the people to support their health.

Principles three and **eight** were not considered to be important to be utilized at this point. This can likely be attributed to the fact that ***principle three*** was seen as more

associated with incorporating an enhanced perspective of health into the community through the chosen interventions. ***Principle eight*** has to do with accountability, which although thought of as important, does not fit with the general goals of the assessment phase

Planning

This phase is associated with deciding the organization of the program, soliciting support, delineating goals and objectives, setting priorities, and developing strategies and interventions (Proceedings, 1988, Brown, 1991, and Elder et al., 1993).

* Refer to Appendix J for a table of the summary of results for principles one through nine used in the planning phase.

Principle One

Health promotion recognizes individual, social, and environmental factors interacting to influence health.

North Karelia, Pawtucket, and the CHHB utilized this principle significantly in the planning phase. North Karelia employed a strong epidemiological approach with a special concentration on the environment in planning interventions. This rationale translated into a flow chart (See Appendix C). Pawtucket targeted specific risk factors but interventions were deeply founded within the Social Learning Theory, which emphasized deterministic relationships between the individual, their behavior, and the environment. The program designers allocated much time, effort, and resources in the planning and piloting of interventions. Comparatively, CHHB planned goals, objectives, and interventions that were founded within the stated elements. Their planning strategy incorporated a community education approach along with understanding of the Protection

Motivation Theory: Together, these considerations served as a basis for the development of the interventions and also laid the groundwork for evaluation.

Nevertheless, many respondents (5 of 7) did *not* consider this principle pertinent during the planning phase. This may seem inconsistent in that the planning of interventions relies on the information collected in the assessment phase and if these factors were assessed then logically, the appropriate planning would ensue. However, a plausible explanation may be that this principle would already have been subsumed within the design of the program. Perhaps, the theoretical constructs that the respondents chose to employ would already have the assumptions of this principle embedded.

Despite the respondents' perceptions, the emphasis of this principle in a heart health promotion program planning phase is considered to be important. The document "Health for All by the year 2000" played an instrumental role in enhancing this perspective as a vital component in the planning of health promotion initiatives and in providing a foundation for the development of documents and publications which served to emphasis the interaction of these elements. Specifically, this principle would be best utilized to provide a basis for the specific delineation of the goals, objectives, and priorities of the program. The implementation of interventions need to be planned to stimulate, facilitate, and maintain behavior changes (Lefebvre, et al., 1987). This is especially successful when interventions are developed that incorporate the interaction between the individual, social, and environmental factors (Elder, et al., 1993).

Principle Two

Health promotion supports a "holistic" approach in which the physical, mental, social, ecological, cultural, and spiritual aspects of health are recognized.

This principle was considered particularly important within the CHHB. Due to the limited success of past initiatives in the Coalfields area and the socioeconomic inequalities, the needs assessment indicated that the respondents placed limited concern on the incidence and effects of CVD, but rather other concerns such as crime prevailed. CHHB skillfully recognized that life experiences, norms, and values directly effect an individual's perception and experience of wellbeing. Therefore, when planning for program strategy and design of interventions there was a special effort to recognize the strong cultural heritage and thus, embed an enhanced concept of health into societal norms. This focus proved to be valuable as the evaluation indicated permeation of the heart health messages throughout Coalfields and to some extent a realization of the expanded effects of heart health (i.e. increased physician visits). The other programs did not specifically incorporate this principle into program planning, but this could likely be attributed to the more recent changes in the concept of health.

Some of the experts (3 of 7) also suggested that this principle had value within the planning phase. The value placed on health has significantly increased as the new millenium approaches particularly as concerns escalate in areas such as health care expenditures, disability costs, and the increased needs of an aging population. The planning of program strategies should be made accordingly to warrant not only short-term achievement of risk factor reduction, but also of long-term health benefits in all other aspects of life.

Although less than half of the Canadian experts felt that this principle could play a key role, and though it is difficult to assess, intervene in, or even evaluate, this principle should be thoughtfully considered in the planning phase especially to foster a long-term perspective. Improved health outcomes are possible only through a commitment to an investment in the health of the whole person and community. This commitment is reflected in the provision of balanced and comprehensive range of services (Canadian Public Health Association Action Statement, 1996 and Canadian Public Health Association Issue Paper, 1996). It is important to recognize that access to these components of health can not be achieved by the health sector alone. This principle suggests that one must recognize the use of complementary services outside of the health system (Canadian Public Health Association Issue Paper, 1996 and Hamilton & Bhatti, 1996). Perhaps this support would provide the basis and strength needed to encourage subsequent global changes.

Principle Three

> **Health promotion requires a long-term perspective. Time and support are necessary to create awareness and build understanding of the health determinants within individuals, communities, and organizations.**

Out of all the programs, the CHHB was the only one that incorporated this principle deliberately in the planning phase. Their underlying philosophy was that of a community development model which relied on working the expanded definition of health and the determinants of health into individuals, the community, and organizations. The interventions that were subsequently developed evolved out of this theory and incorporated this principle.

The respondents (5 of 7) strongly indicated the value of this principle in planning the program. Institutionalization is a primary goal of health promotion programs; long-term presence in the community must be planned from the outset (Elder et al, 1993). To ensure the success of the health promotion program, support in all its forms (monetary, physical, environmental, etc.) an understanding of the relationship of health and prosperity is a necessity (Hamilton & Bhatti, 1996 and Federal Advisory Committee, 1994). The continuation of the program relies on integrating the program and its goals into the community.

This principle is an important consideration for the planning of the program including the organization of the program as well as the developing of interventions. The premise of this principle is that by addressing the full range of the determinants of health through an organized system of practice, this will create a synergistic effect and have a significant impact on health status (Canadian Public Health Association Issue Paper, 1996). Therefore, when planning strategies and organizing the health promotion program, it is essential to incorporate the assumptions of this principle.

Principle Four

Health promotion necessitates a balance between central and decentralized decision-making on policies that affect people's lives where they reside, in leisure, and work.

Each of the past programs utilized this principle in the planning phase. There was an underlying intent that the program would eventually need to be self-sustaining and that integrating the program into existing social structures would provide the most significant outcomes. At the same time, de-centralized members and centralized experts were needed to give balance and to provide specialized in-sights into the decision-making process.

North Karelia planned to train various community leaders to ensure the integration of the program into the existing cultural milieu. Pawtucket relied on fostering the planning of interventions and program strategies to evolve directly from the community in terms of volunteers. In the CHHB, this was noted to be somewhat difficult, but with perseverance the lay leaders were identified and planning of program strategies could begin.

The majority of respondents (4 of 7) also agreed that the community needs to be actively involved in the decision-making processes in order to provide balance and ensure the needs of the community are adequately identified and the mechanisms can be established to meet the needs. A priority of health promotion is to strengthen community action so that the community has the capacity to set priorities and make decisions on issues that effect their health (Hamilton & Bhatti, 1996). The most effective methods for health promotion activities rely on the coalition of the people in the community coupled with input and guidance from the centralized sources. Therefore, this principle can be considered integral to health promotion program planning.

Principle Five

> **Health promotion depends on a degree of multi-sectoral involvement including support of the community, organizations, businesses, and policy sectors. It bases its practice in the need to have similar values and vision of a preferred future.**

Each of the past programs considered this principle to be important within the planning phase. North Karelia, Pawtucket, and CHHB used the premise of this principle as a method to elicit the support from the community. As well, each program utilized the crux of this principle to enhance the support structures within the community (i.e. to

create increases in available heart health products and religious, workplace, and school support).

In comparison, the majority of respondents (4 of 7) felt that it was important to maintain those relationships that developed or evolved from the assessment phase and to embed them in the planning of program strategies and eventual implementation. This collaboration across the sectors together with the active involvement of the community would lead to success of program strategies.

To have a significant impact on the health of the population, comprehensive inter-sectoral initiatives must be developed (Federal Advisory Committee, 1996). Partnerships are needed to build a strong health system, reduce duplication of services, improve the coordination of services, and strengthen the skills of the service providers (Canadian Public Health Association Action Statement, 1996). Given the support for this principle, it can be considered vital in the program planning stage where program strategies are defined and collaboration is a necessary component heading into the implementation stage. In the long-term, this positive multi-sectoral involvement will ultimately foster healthy public policy and encourage multi-disciplinary practice.

Principle Six

Health promotion must draw on knowledge from social, economic, political, medical, and environmental sciences as well as on experiential knowledge.

The analysis of the past programs indicated widespread use of the concepts founded within this principle. North Karelia utilized the information and knowledge bases available at the time. Being one of the first community-based health promotion programs, a distinct outcome was to create assumptions for future programs to

investigate. This was evident in the formation of the Unified Model (See Appendix A) which incorporated several variables from a range of knowledge bases. Pawtucket was strongly theory based. Much effort was taken to create a sound theoretically based program using well-known and appreciated theories. Additionally, new information was created in the extensive use of the volunteer system. CHHB was guided by the national perspective on health. The original inspiration for the program began with information collected regarding the medical, social, and financial costs of CVD. At program initiation representatives from various sectors were involved including intervention and strategy development.

The majority of respondents (5 of 7) felt this principle to be important during the planning phase. In order to develop accurate interventions and strategies to address the program priorities, the appropriate experts need to be involved.

Principle six can be considered vital to program planning. The merging of perspectives would lead to an integrated approach to strategies appropriate to the community and conducive to enhancing the health of the targeted community. Blending the skills and knowledge from a variety of knowledge bases, would lead to the creation of comprehensive interventions and multi-faceted approaches (Canadian Public Health Association Action Statement, 1996 and Canadian Public Health Association Issue Paper, 1996).

Principle Seven

Health promotion utilizes the concept of empowerment as an important strategy in achieving long-term changes and sustainability of programs.

The past programs all attempted to incorporate this concept into their programs. Given the varying situations from which each program evolved, it could be extrapolated that each was successful in utilizing this concept, to an extent, as a health promotion strategy. The most important implication that emerged from the three programs was that using empowerment as a health promotion strategy contributed to the long-term maintenance and institutionalization of the health promotion effort.

Interestingly, only 3 of 7 respondents felt that it was important to incorporate this principle into the planning phase. Despite the strong presence of this principle in the literature and in its use in other programs, it is uncertain why only three of the experts gave credence to its importance in this part of the program phase. Perhaps the respondents felt that the concept of empowerment would be best operationalized as intervention strategies in the implementation phase in terms of providing access to information, creating supportive environments, and developing the intervention strategies to incorporate principles of empowerment (i.e. strengthening community capacity and enabling them to take action in regards to their health). Or it could be that the logistics of incorporating this concept to the fullest extent possible would increase costs in terms of time commitment, funding, resources, and the effort to secure and maintain partnerships among experts and community members. Such increases in demands might not be perceived as being justified. It is unclear why empowerment was not considered a priority amongst more of the expert respondents.

The support for this principle in the planning phase, especially in the literature and in the use in the past programs, indicates that it is deemed to be of value by many whom work in the area of heart health promotion. An important component of any program is the organized action between experts and the community in the adoption of objectives, development of structure and organizational participation (Brown, 1991, Elder et al., 1993, and Mittlemark et al., 1993). Although the objectives, structures, and action are dependent on community conditions, the most important caveat is that community participation should be as central as possible (Brown, 1991). Using this strategy in the battle against CVD would help integrate heart health into the fiber of community existence. Having the people assert control over factors that effect their health would lead to enhanced health (Airhihenbuwa, 1994). It appears that the principle of empowerment can help to produce strong support, sustainability, and planning of appropriate interventions and program strategies.

Principle Eight

Health promotion emphasizes public accountability for costs, activities, and effects.

In North Karelia, the cost-effective interventions and related effects were only realized years later. Pawtucket designers realized the limitation of resources available and thus instituted programs based on a reliance on volunteers and community alliances in order to ensure program continuation. The planners were committed to achieving accountability of the program and to demonstrating this to the people. The CHHB was very careful in pursuing low cost and effective interventions. They worked to enhance past initiatives thereby maintaining the success of past interventions and strengthening

them with advanced knowledge and concerted efforts. A specific goal was to ensure the planning of cost-effective interventions.

Three of the seven respondents agreed that in times of fiscal constraints this principle has a higher priority than ever before and that it needs to be worked into program planning. However, support remained limited for incorporation of this principle in the planning phase.

Overall, there was marginal support for incorporating this principle into the program planning phase. This could be attributed to the underlying notion that there is always a strong answerability to others (i.e. program supporters) and that accountability can be dictated by the success or impact of the program in terms of goal achievement.

Principle Nine

Health promotion advocates healthy public policy.

North Karelia and Pawtucket showed limited involvement in the area of healthy public policy during the planning phase. CHHB substantially indicated this as an important component in program planning. The CHHB program evolved out of a government commitment to health. Specific objectives were delineated regarding the further development of healthy policies and also led the way to promoting initiatives in the community.

The respondents (5 of 7) agreed that an ultimate indicator of success was the development of policy pursuant to the interventions in maintaining initiatives and health behaviors.

This principle, therefore, has found greater support as time passes. It was the most recent program (CHHB) and in the long-term follow-up of the other programs (North

Karelia and Pawtucket) along with the respondents that supported the incorporation of this principle in the planning phases. This was likely attributed to the notion that interventions that lead to policy changes would invoke greater support and long-term maintenance of behavior changes and collaborations amongst multi-sectors. Policies affect the determinants of health (Canadian Public Health Association Action Statement, 1996). By the end of the 1990's, it was found that successful programs would incorporate this global perspective in expectation that heart health will be a working priority amongst all sectors, across disciplines, and as importantly effecting changes within the individual.

Summary

See Table 12 for a summary of results as outlined in the preceding section.

Table 12: Summary of Results

Organization of Principles Into the Planning Phase - Experts' Responses Compared with the Past Programs

PLANNING		
Principle	**Experts**	**Programs**
1	2/7	3/3
2	3/7	CHHB
3	5/7	CHHB
4	5/7	3/3
5	4/7	3/3
6	5/7	3/3
7	3/7	3/3
8	3/7	CHHB
9	5/7	CHHB

In general, the data indicates widespread agreement that **principles one, three, four, five,** and **six** are vital components of the planning phase of a heart health promotion program. ***Principle one*** was considered essential primarily due to the types of information collected in the assessment phase. As suggested in the previous section, many theories have been developed fundamentally from the premise that an individual is

not an entity unto itself, rather the influences of the social and environment factor play a reciprocal role. Therefore, planning for program goals, objectives, strategies, and interventions are contingent upon these relationships and the modification of which will produce desired effects. ***Principle three*** was strongly supported by the respondents and was affirmed by the distinct usage within the most recent program (CHHB). Working the expanded components of health and the realization that several elements interact to influence health are crucial in ascertaining long-term effects. Therefore, utilizing this principle in the planning of program strategies will assist in fostering strong support for program continuation and acceptance. ***Principle four,*** as well, builds on the premise of the other principles and suggests a paramount component of the planning phase. There was strong support for this principle which specifically suggests that for effective program design, the coalition between the community and the "experts" would be critical in the delineation of appropriate program activities. Given the recognition that health is far more than the absence of disease and that several factors from a range of sectors serve to influence this state of health, it seems fitting that ***principle five*** be utilized in the planning phase. Application of this principle would help to secure support for initiatives and to achieve partnerships which would serve to impact the multi-factoral nature of CVD. ***Principle six*** draws on the merging of perspectives which allows for an integrated approach to the program. Utilizing a firm, but diversified knowledge base should lead to the establishment of comprehensive and multi-faceted strategies. Together, these principles incorporated in the planning phase should positively impact the design as well as the ultimate goals of the heart health promotion program.

Some support for **principles seven, eight,** and **nine** was indicated. Interestingly the significance of ***principle seven*** was interpreted as being valuable as a consequence of its use in the three programs reviewed. However, the Canadian experts did not totally agree with the use of this principle in the planning phase although no reasons were given. Despite this, the literature supports the concept of empowerment as an important strategy that works best when incorporated from program inception. It helps to ensure the long-term maintenance and institutionalization of the health promotion effort. ***Principle eight*** was also thought to be somewhat important to consider at this phase. Its impact was best noted in the development of appropriate goals and evaluation strategies. The success of which could translate into accountability for all stakeholders (i.e. funders, partnerships, etc.). The implementation of ***principle nine*** follows the rationale of principle eight in that although policies are integral strengthening a health promotion perspective, the long-term effects of these are not fully realized until well beyond initial program time lines. The global perspective of reinforcing health behaviors amongst all sectors, across disciplines, and within the individual are important to consider in program design. However, there must be the understanding that these changes in health behaviors are likely the product of long-term support and collaborations seen years after program onset. These relations seem to be the critical components that will determine the ultimate success of the interventions and the program itself.

Principle two was not seen as important during the planning phase. This is likely attributed to the difficulty in outlining specific evaluation measures (i.e. goals and objectives) or in developing approaches and strategies in the achievement of this

perspective. The primary purpose of this principle was to ensure a comprehensive perspective on the definition of health and the broad scope of purpose it assumes.

Implementation

This phase consists of the actual performance of planned intervention and program strategies. Implementation turns theories and ideas into action; translating design into effectively operating programs (Proceedings, 1988, Green & Kreuter, 1995, and Bracht, 1999) (Refer to Appendix J for a summary of results).

Principle One

Health promotion recognizes individual, social, and environmental factors interacting to influence health.

All programs studied integrated the premise of this principle into the implementation phase. The interventions were dependent on the identified risk behavior and the encouragement of individuals to change these actions. As well, other interventions were employed to modify the surroundings in order to encourage the appropriate behavior change, discourage health-damaging behaviors, and eliminate environmental hazards to the health-promoting behavior while strengthening a health-promoting environment.

Interestingly, only 2 of 7 respondents thought this principle was important to consider during the implementation phase. It remains unclear as to the reasons why the respondents thought this principle was important in the assessment phase (5 of 7) yet not significant enough to considered in the planning or implementation phase. Recent literature has suggested the combination of a variety of tactics and techniques incorporating the use of multiple theories in order to invoke reductions in health risk

behavior and encourage the maintenance of behavior change (Shea & Basch, 1990, Brown, 1991, Hyndman et al., 1993, Mittlemark, et al., 1993, Green & Kreuter, 1997 and Bracht, 1999).

Despite the lack of support by the Canadian experts, the analysis of the past programs along with documentation in the literature, suggests that this principle is valuable in the implementation phase.

Principle Two

Health promotion supports a "holistic" approach in which the physical, mental, social, ecological, cultural, and spiritual aspects of health are recognized.

Although it could be extrapolated through long-term evaluations that North Karelia and Pawtucket had incorporated the premise of this principle in the implementation phase, it really was only an inadvertent implementation. On the other hand, CHHB generated a concerted effort to devise strategies that would support a holistic approach in program implementation. This was especially evident in the awareness tactics that were used to respond to the seemingly lack of concern for heart health by utilizing different strategies that would promote the program, the strategies, and the efficacy of the individual to address these concerns. The messages were constructed to suggest that decreasing one's risk to CVD would in essence increase one's heart health and therefore effect positive changes in other aspects of life. The CHHB made a concerted effort to appreciate the holistic perspective of health throughout program implementation.

The respondents (5 of 7) agreed that this principle was integral to the implementation phase. Recognizing that health is a complex inter-relationship of

differing factors would enable the development of comprehensive interventions. Additionally, the perception that health has a more comprehensive definition suggests that the interventions should include a degree of forming collaborations with other sectors that may show a vested interest in the program's strategies (i.e. increased demand for heart health products). Therefore, this principle can be considered a significant component of the implementation phase.

Principle Three

> **Health promotion requires a long-term perspective. Time and support are necessary to create awareness and build understanding of the health determinants within individuals, communities, and organizations.**

All programs included this principle within the implementation of the program strategies. Intervention tactics included the fostering of support from various sectors in order to ensure success of the program. North Karelia planned for and executed the strategy to modify the manner in which health services were delivered. This would ultimately have significant impact on the community which was evident in the long-term and sustained changes. As well, Pawtucket eventually realized the relevance of this principle and developed additional strategies (and phases) to involve the entire community in the program. CHHB was founded on an understanding that time and support were necessary in order to invoke behavior change maintenance and the planned interventions reflected this conviction.

Many of the respondents (3 of 7) also felt this principle important to maintain within the implementation of program strategies. Multi-level and integrated interventions should incorporate components of individual and community-based strategies along with the characteristics of several sound theories (i.e. behavior change, social marketing,

environment interventions, etc) and these should be carried out over the long-term. Together, these efforts contribute to producing behavior change and sustained effects (Elder et al., 1993). Thus, there is some support to suggest that this principle is integral to program success and needs to be incorporated into the implementation phase.

Principle Four

Health promotion necessitates a balance between central and decentralized decision-making on policies that affect people's lives where they reside, in leisure, and work.

All programs utilized the assumptions of this principle in the implementation phase. North Karelia was founded on a collaboration between concerned community members and the interest of the "experts" who approached parliament to "undertake action", thus incorporating the premise of balance. The interventions evolved out of this perspective and were implemented by health workers and volunteers. These interventions were performed in various sectors of the community to ascertain complete permeation in the community. Pawtucket was founded on the basis of community activation which saw to it a strong mobilization of the community. The use of volunteers was embedded within this perspective and subsequent implementation of the program into various sectors and with active involvement of the community was achieved. CHHB recognized the difficulty in initiating the premise of the principle in early phases and therefore developed interventions specifically addressed to recruit the participation of the community members. As well, the awareness interventions were efficacious in enhancing the perspective of heart health in the community.

The majority of respondents (4 of 7) felt that this principle was important to implement within this phase. Although many different objectives may be appropriate

depending on the community conditions, the most important caveat is that community participation be a central process (Brown, 1991). This participation is vital to build skills and leadership to assure that what emerges from the heart health promotion initiatives is the long-term sustainability of the program. Despite that three of the seven experts did not support the principle's inclusion, there was sufficient support from the three past program's use as well as the remaining four respondents to consider this principle as an important component in the implementation phase.

Principle Five

Health promotion depends on a degree of multi-sectoral involvement including support of the community, organizations, businesses, and policy sectors. It bases its practice in the need to have similar values and vision of a preferred future.

The successes of the past program can be attributed to the incorporation of this principle. North Karelia's interventions involved direct involvement of community members, businesses, and politicians to support the program's initiatives. The results of this broad-based, multi-sectoral support are noted in the long-term continuation of the program. Pawtucket utilized this component best in this phase where interventions were directed at establishing community linkages. CHHB designers believed such multi-sectoral involvement to be an important component from program inception. The program was founded on the involvement and support form various sectors. This led to interventions that were directed at soliciting commitment from the community.

Significantly, the majority of respondents (6 of 7) felt that these relationships were crucial to establish, involve, and maintain throughout program design. This principle was well established in the literature which suggested that including the support

from outside leaders and groups can make the difference between successful and unsuccessful health promotion effort (Brown, 1991, Elder et al., 1993, and Bracht, 1999). Thus, the inclusion of this principle during the implementation phase can be considered vital to program success.

Principle Six

Health promotion must draw on knowledge from social, economic, political, medical, and environmental sciences as well as on experiential knowledge.

All programs included varying degrees of emphasis regarding knowledge and insight gained from other disciplines. North Karelia relied mostly on medical interventions, but incorporated strategies to modify the environment. Planners also gave special consideration to the social milieu in North Karelia at the time. Pawtucket planners relied on the theories of social learning and community activation which provided a strong emphasis on knowledge accrued from the many sectors of science as well as from experiential-based documentation. These various knowledge bases formed the foundation for the Pawtucket program. The CHHB was particularly successful in using a wide knowledge base. Due to the fact that cultural and social considerations were necessary within the CHHB, the interventions were primarily directed toward the goal of invoking individual changes and to the utilization of existing structures to support the enhancement of heart health. The program was initiated from the strong political support for heart health. The CHHB planners capitalized on interested subgroups (i.e. workplace and schools) and were then able to involve other sectors, such as the economic groups. The result of this interplay required that the CHHB designers were required to draw on a cross-section of disciplines as well as on experiential knowledge.

Some of the respondents (3 of 7) felt that this principle was a necessary component of this phase. This perspective was likely attributed to the fact that the majority of respondents found a broad knowledge base to be a critical component in the planning phase and therefore the development of the interventions already incorporated the assumptions of this principle. By combining the insights gained through the operation of the three past programs and the moderate support of the Canadian experts, it can be concluded that this principle is an important perspective to maintain throughout program implementation.

Principle Seven

Health promotion utilizes the concept of empowerment as an important strategy in achieving long-term changes and sustainability of programs.

North Karelia created several key interventions which were founded within the concept of empowerment. The goals of which were to infiltrate the social structures with heart health messages, provide access to information and services, and train people to obtain the skills necessary to make changes. Pawtucket embodied this concept by the extensive use of volunteers to implement the program interventions. The volunteers were to retain control over the continued implementation of the program initiatives. This strategy helped to mobilize the community against CVD and contributed to the eventual sustainability of the program by the community. CHHB also relied on techniques to raise the awareness of and thus significance of heart disease in a community. The interventions proved to be most successful in mobilizing the community and ensuring support for the program after initial program completion.

Most respondents (6 of 7) felt that this principle was critical to maintain within the implementation phase. The most successful programs relied on extensive involvement from the community and on empowering individuals to take steps to enhance their heart health. Founded within the precepts of community development, health promotion strategies emphasized the importance of empowering communities to define and take forward measures to improve the health of their communities (Labonte, 1992). Strategies that were implemented included the community instituting their own action plans, participation in decision-making, and the building of skills and capacity among individuals to play a meaningful role in restructuring their communities (Canadian Public Health Association Issue Paper, 1996). Based on the feedback from the respondents and the evidence found in the literature, this principle can be viewed as a fundamental component of the implementation phase.

Principle Eight

Health promotion emphasizes public accountability for costs, activities, and effects

North Karelia's portrayal of accountability was really only identified much later out of long-term evaluation actions that were conducted outside of the initial goals of the program in terms of mortality/morbidity, disability costs, etc. Alternatively, a specific goal in Pawtucket was for the community to assume ownership and responsibility of the entire program. Through the establishment of this goal, the designers emphasized public accountability with regards to activities and outcomes. Therefore, the principle of accountability was fundamental as interventions were performed based within this perspective and in compliance with the goals of the program. Similarly, from the CHHB

data, it could be extrapolated that the interventions were grounded in the desire to maintain cost effectiveness and accountability for the actions. The concerted efforts to utilize established structures portrays the avid incorporation of this principle.

Regardless of the above information, only 2 of 7 respondents thought this principle was important to emphasis in this phase. This could be attributed to the more evaluative nature of the principle in that accountability arises from the success of planned goals of the program.

Principle Nine

Health promotion advocates healthy public policy.

Neither North Karelia nor Pawtucket instituted any specific interventions to facilitate policy changes during initial program implementation. Comparatively and as evident in other phases, the CHHB had indicated a special consideration for this principle. However, no direct actions were carried out to promote policy changes.

The majority of respondents (5 of 7) felt that this was an important principle to consider during this phase. This perception was likely based on the fact that the demand from the community would elicit the development of policies to maintain healthy behavior changes. Hence, the respondents held a more longer-term perspective which suggested that the implementation phase lays the groundwork for future actions. These actions would help integrate the comprehensive determinants of health as an inherent part of the community, to foster the maintenance of initiatives, and to create supportive environments for the continued influence of initiatives. Consequently, once the program was in place, maintained, and deriving positive results, the development of healthy public policy could be initiated.

This principle had moderate support during this phase and it is mainly the perspectives of the program planners who would decide if policy changes were an important outcome for the program in early stages. The goal of instituting policy changes is contingent upon the reality of available resources including the time and commitment necessary to bring about the successful execution of policy changes.

Summary

See Table 13 for a summary of results as outlined in the preceding section.

Table 13: Summary of Results

Organization of Principles Into the Implementation Phase - Experts' Responses Compared with the Past Programs

IMPLEMENTATION		
Principle	**Experts**	**Programs**
1	2/7	3/3
2	5/7	CHHB
3	3/7	3/3
4	4/7	3/3
5	6/7	3/3
6	3/7	3/3
7	6/7	3/3
8	2/7	Paw, CHHB
9	5/7	CHHB

In general, the results of the analysis indicated that **principles two, five, seven,** and **nine** were most integral to program implementation. The implementation of planned interventions relies upon the concerted understanding found in the premise of ***principle two***. The perception that health is a complex entity encourages the development of comprehensive interventions and approaches from multiple dimensions. ***Principle five***

proposes that the implementation phase should involve stakeholders from multi-sectors in order to compound the impact against CVD on diverse levels. The implementation of the constructs founded within the concept of empowerment (***principle seven***) are particularly evident in this phase. The community participation approach to the implementation of interventions contributes to skills development and capacity building. These components are found to be necessary in determining ultimate success of program integration into the community. ***Principle nine*** maintains the global perspective within the program which suggests that over the long-term continued implementation of program initiatives may lead to the development of healthy public policy which would ultimately provide the necessary support for the heart health initiatives.

There was also moderate support for the remaining **principles one, three, four, six,** and **eight** within the implementation phase. ***Principle one*** was found to be only partially supportive in terms of the discrepancy between the respondents answers and the significant use in the past programs. However, there was strong support in the literature for the assumptions within this principle to be utilized in the implementing of interventions and strategies. ***Principle three*** acquired moderate support in that multi-level and integrated interventions would elicit the long-term support necessary to sustain the program. Firmly grounded within the perspective of community participation regarding problem-posing and decision-making, ***principle four*** purports that in utilizing these assumptions long-term sustainability and permeation of the initiatives would be achieved. ***Principle six*** maintains that the merging of perspectives allows for integrated interventions that lead to positive comprehensive changes within the individual, community, organizations, and other sectors. Somewhat less support was found for

principle eight in that accountability was perceived to arise out of evaluation methodologies, however, it is important to keep in mind that the evaluation is dependent upon the strategies and interventions implemented during this phase.

Evaluation

This phase is associated with determining the efficacy of the interventions part way through as well as determining the summative results at program completion. Formative or process evaluations provide feedback during the implementation phase and help designers to determine the immediate effectiveness and appropriateness of the interventions (Proceedings, 1988, Shea & Basch, 1990, Green & Kreuter, 1997, and Bracht, 1999). Summative evaluations include the *impact* and *outcome* effects. Impact evaluations are typically considered the determination of the immediate effects of the program (or some aspect of it) on target behaviors and their influences (Green & Kreuter, 1997). Outcome evaluations consist of longitudinal effects (as derived from assessment data) and may include constructs such as health status, quality of life, feasibility, cost, and out of scope changes (Shea & Basch, 1990, Green & Kreuter, 1997, and Bracht, 1999).

* Refer to Appendix J for a table of the summary of results for principles one through nine used in the evaluation phase.

Principle One

Health promotion recognizes individual, social, and environmental factors interacting to influence health.

All the programs utilized the premise of this principle within the evaluation. Both North Karelia and Pawtucket had a strong epidemiological focus and therefore had

incorporated the variables to be studied from program inception. The difference was that North Karelia program planners included a research group from the university and subsequently had noted research opportunities as a priority in the program. Pawtucket utilized a unique approach to determining the effects of the interventions that were developed to modify the individual, social, and environmental factors. A "contact card' was developed to monitor participation rates rather that the labor intensive and expensive risk factor surveys. Results were encouraging and could be extrapolated to relate to changes in morbidity and mortality rates. CHHB utilized a similar approach in evaluation by monitoring the participation of the community in interventions. As well, a well-known method of monitoring trends of CVD, the MONICA project, that was underway prior to program initiation was continued as an evaluation source.

Interestingly, only one respondent felt this to be important in evaluation phase. This could easily be attributed to logistical concerns such as cost, timing, difficulty in determining specific relationships between variables and interventions, and non-random assignments (Altman, 1986 and Hancock et al., 1997). Although it seems only appropriate that the same variables targeted in the assessment, planning, and implementation phases would be evaluated to determine changes, in practice, evaluators placed more emphasis on examining overall endpoints than on linking specific effects with specific interventions.

It could be concluded that this principle would be ideally incorporated in second stage evaluations (i.e. a period of time after immediate program completion) and include issues such as determining the independent effects of specific interventions and linking effects to changes in knowledge, attitude, and behavior. Although community-based

interventions are judged according to their ability to initiate and maintain lasting influences on health behaviors, to examine such relationships and variables, multiple long-term evaluations need to be done which are costly and have a plethora of issues (i.e. attrition, money, questionable validity, etc.) (Altman, 1986).

Principle Two

Health promotion supports a "holistic" approach in which the physical, mental, social, ecological, cultural, and spiritual aspects of health are recognized.

Given the length of time that the North Karelia and Pawtucket programs operated, and the immense research opportunities these provided, supplementary evaluation was completed that included a more comprehensive analysis of the risk factor changes as well as spin-offs of the interventions (i.e. reports of wellbeing). Comparatively, since the CHHB used the premise of this principle throughout, it is only appropriate that it was included in the evaluation via surveys and focus groups.

As with the previous principle, only one respondent thought this to be important to consider here. However, again related to the logistics of performing evaluations, the evaluation of this principle was not feasible for mainly two reasons – the short length of time the original program is implemented and also the funding necessary to complete such an evaluation.

One could conclude that despite the difficulty in outwardly incorporating this principle in the initial evaluation, the underlying concept should be prevalent. Despite the relative importance of this principle, the evaluation should remain as an opportunity for other interested researchers for years after program inception. It has been suggested that despite the difficulty in conceptualizing the broad range of outcomes, there is a rich and

vast amount of information that could be extrapolated from evaluations that can be linked to broad concepts such as wellbeing and address the question of how the concept of health becomes a part of the societal fabric (Altman, 1986 and Hancock et al., 1997).

Principle Three

Health promotion requires a long-term perspective. Time and support are necessary to create awareness and build understanding of the health determinants within individuals, communities, and organizations.

All programs were built upon the importance of including an evaluation component which would address the matter of health within the community. North Karelia's use of the principle was not entirely recognized until many years later when proposed changes to the health care system was maintained. Pawtucket recognized the importance of this principle and the evaluation confirmed that the premise of the principle was not fully realized. The valuable lesson gained was that early community involvement would lead to acceptance of the program and ultimate success. The CHHB incorporated this perspective from program inception and evaluated the interventions as successful in permeating heart health messages throughout the community. This was especially noted in the workplace and school initiatives.

Many of the respondents (3/7) thought this principle was important to the evaluation phase. However, the implication within this principle is the long-term perspective that is required. Since many programs operate for approximately 5 years, this is not deemed enough time to fully actualize these effects.

Therefore, as a measure of program success it is important to realize the significance of this principle and make special considerations to evaluate the

accomplishment of it, but it is more important to remember that this principle is best utilized in the longer-term than at immediate program completion.

Principle Four

Health promotion necessitates a balance between central and decentralized decision-making on policies that affect people's lives where they reside, in leisure, and work.

At initial program end (5 years), North Karelia did not formally evaluate the success of the assumptions of this principle. However, several years later this was formally evaluated and found to be successful in terms of integration into the community. Pawtucket was reliant on volunteers to take over the program and therefore this was a priority evaluation element as the balance of power shifted to the community. CHHB did not specifically evaluate this principle, but awareness reports suggested that the program had managed to become part of the social milieu wherein decisions were made both centrally and de-centrally. One could extrapolate this to indicate future involvement of the community and further permeation of the concepts of heart health.

The respondents (6 of 7) did *not* include this principle within the evaluation phase. This perception could again relate to the practical standpoint. Five years of program operation is not enough time, there are likely not enough resources to fully evaluate this principle, and it would be difficult to quantitatively evaluate this point as well. Conceivably, one could conclude that the nature of this principle does not outwardly inquire as to the success of the program as much as CVD indicators relate to the success of a program. Rather, it is suggested that for purposes of learning for future program initiatives, this principle had been correlated with effectiveness.

Principle Five

Health promotion depends on a degree of multi-sectoral involvement including support of the community, organizations, businesses, and policy sectors. It bases its practice in the need to have similar values and vision of a preferred future.

None of the programs specifically addressed the multi-sectoral involvement in the evaluation. However, these relationships were discussed as being integral to program productiveness.

There was some support for evaluation of this principle (3 of 7). This could likely be attributed to the fact that sustainability is reliant on these relationships and this may be a goal or objective deemed important from program inception. As well, theorists have hypothesized with some evidence that multi-sectoral inclusion would lead to enhanced program operation and broad level changes (i.e. funding, policy, etc.). The literature agrees that without specific delineation of the domains within this concept and the considerable variations within the community itself, evaluation of this principle can be very difficult (Hancock et al., 1997).

It can be extrapolated that, in terms of process, immediate, or even impact evaluation, this principle is not a priority. Considerable information could be obtained in long-term outcome evaluation that would invaluable for use in the future planning of health promotion programs if the implicit values of this principle were recognized at the outset in establishing the evaluation schema.

Principle Six

Health promotion must draw on knowledge from social, economic, political, medical, and environmental sciences as well as on experiential knowledge.

None of the past programs specifically addressed the use of multiple perspectives as a variable to evaluate.

The majority of respondents (4 of 7) thought that this is a necessary part of the evaluation framework. This would ensure diverse and comprehensive collection of information. CVD is multi-factoral and influences every aspect of one's life; therefore all components of the intertwining elements of CVD need to be evaluated. However, dimensions from which data could be collected are vast (i.e. physiology, health knowledge, individual characteristics, cost effectiveness, participation rates, media coverage, number of alliances created, structural changes, etc.). The amount and type of information to be collected is entirely dependent on the goals of the program, who the funding agency is, what the priorities of the program are, and the practical considerations (Altman, 1986 and Hancock et al., 1997). As a result, the needs of the program and its supporters will determine the type of data to be collected, but it is vital to incorporate a broad knowledge base to the extent required.

Principle Seven

Health promotion utilizes the concept of empowerment as an important strategy in achieving long-term changes and sustainability of programs.

In later years, North Karelia was found to have used the concept of empowerment successfully as noted by the degree of institutionalization of the program, continuation of partnerships, and ultimate policy changes. Pawtucket found a way to evaluate the incorporation of the concept of empowerment through the use of a "contact card" which

relayed pertinent information regarding the participants. As well, the continuation of initiatives after experts withdrew indicated the degree of community ownership and control. Results from the CHHB also indicated success in the use of empowerment strategies in that the proliferation and ultimate integration of messages, although, these evaluation could be considered somewhat premature.

The respondents (6 of 7) generally felt that this principle was *not* important in the evaluation of program success. It could be concluded that the concept of empowerment is utilized as a health promotion strategy and therefore there are no concrete variables to evaluate this principle. The literature suggests that this is an imperative component to program success, however, it may not be considered valuable in determining process, immediate, or even impact evaluations (Robertson & Minkler, 1994, Airhihenbuwa, 1994, Paridis, 1995, Canadian Public Health Association Action Statement, 1996). Therefore, this principle will not be considered as an initial priority in the evaluation phase of health promotion programs.

Principle Eight

Health promotion emphasizes public accountability for costs, activities, and effects

All programs are ultimately responsible to the people that supported them and to the target group (i.e. community). An indication of accountability is through evaluation techniques. North Karelia established an intense priority on evaluation. Several years after initial program operation, evaluations were done in regards to feasibility, costs, and consequences. Given these results, considerable successes of the program was realized. North Karelia was found to be exceptionally accountable for the outcomes in terms of

CVD mortality and morbidity, costs, and broader consequences (i.e. wellbeing, structural changes, etc.) and continues to do so. Pawtucket had also proven accountability in terms of the volunteer system taking over the program. However, significant changes in CVD morbidity and mortality have yet to manifest. CHHB realized the concern over rising costs and considered this aspect within their evaluation. The success of sub-initiatives (i.e. healthy schools) provided the evidence necessary in establishing accountability.

All of respondents (7 of 7) felt that accountability is imperative to program evaluation. This will assist in securing funding and support for program continuation as well as provide the necessary evidence to the community that initiatives are advantageous. Evaluation indicators are of critical importance. The information collected can be utilized for numerous purposes including to elicit further support of initiatives, fostering collaborations across sectors, restructuring of health services, encourage public participation, and provide for legitimacy of actions (Canadian Public Health Association Action Statement, 1996, Canadian Public Health Association Issue Paper, 1996, Hancock et al., 1997, Green & Kreuter, 1997, and Bracht, 1992). This would suggest that this principle was a very important principle to embody in the evaluation phase.

Principle Nine

Health promotion advocates healthy public policy.

North Karelia evaluated this principle only many years after program inception. Though, not directly a priority it evolved to be a major influence in policy changes. As a result, numerous other broad spectrum changes incurred. Initial reports indicated that in Pawtucket, demand for various aspects of heart health (i.e. heart health products, environment changes - smoking) were increasing. It could be predicted that policy

changes would ensue. The CHHB had priorities from governmental sectors that required evaluation information to ascertain that policies, being emphasized at higher levels, were actually valued at the community level.

None of the respondents included support for this principle in the evaluation phase. It could be suggested that the respondents did not incorporate this principle at this level because typical program life-span would not see any changes at the policy levels and only after long-term, sustained interventions and demand from community leaders would any policy changes result.

Consequently, this principle would only be emphasized as an evaluation component over the long-term. The ultimate result of health reform would be an integrated system that builds healthier communities (Canadian Public Health Association Issues Paper, 1996). As the principle suggests health promotion advocates for policy changes in order to elicit numerous widespread changes on the individual, social, physical, economical, and political levels. It may not fit well into a program's schema for evaluation.

Summary

Table 14: Summary of Results

Organization of Principles Into the Evaluation Phase - Experts' Responses Compared with the Past Programs

EVALUATION		
Principle	**Experts**	**Programs**
1	1/7	3/3
2	1/7	3/3
3	3/7	3/3
4	1/7	Paw
5	3/7	0/3
6	4/7	0/3
7	1/7	3/3
8	7/7	3/3
9	0/7	NK, CHHB

During the evaluation phase the principles that were generally found to be crucial were **principles three, six,** and **eight.** ***Principle three*** suggests that a long-term perspective was critical in supporting the effects of the heart health promotion program. Many variables and relationships will not have time to evolve given the initial short period of time allocated to program operation. This longer-term perspective would allow for acceptance amongst the stakeholders that in order to determine the success of critical components and outcomes, a long-term commitment was warranted. ***Principle six***

generally indicates that the evaluation must incorporate a broad knowledge base in order to ascertain appropriate and relevant results. The dimensions that an evaluation could analyze are endless. Therefore, the amount and type of information to be collected is entirely dependent on the goals and priorities of program stakeholders. Several issues may arise (i.e. what types of data to collect, realm of analysis, etc.), but these are best addressed in the earlier phase of program planning. As well, several types of evaluation are available and necessary in order to elaborate on the effectiveness of the program. Different types of information are obtained when ascertaining the process evaluation of interventions and strategies as compared to impact or long-term outcomes. ***Principle eight*** is the pinnacle of the evaluation phase whereby the results will determine the sustainability and continuation of initiatives.

The analysis indicated only marginal support for **principles one, two, four, five, seven,** and **nine.** The issues which might contribute to this lack of support for such assumptions are: cost, difficulty in ascertaining variables, timing, design issues, feasibility, and relative importance. Promoting the diverse evaluation of past and current programs remains a challenge.

Conclusion

The information compiled in this chapter provided a remarkable range of information in the organization of the principles within a health promotion program (Refer to Appendix J for a table of the summary of results). The following table, Table 15, depicts a summation of the use of the health promotion principles as derived from the analysis of the three past programs and the experts' responses.

Table 15: Principle Organization – A Summation of Results

	ASSESSMENT	PLANNING	IMPLEMENTATION	EVALUATION
Most Important	1, 5, 6, 7	1, 3, 4, 5, 6	2, 5, 7, 9	3, 6, 8
Somewhat Important	2, 4, 9	7, 8, 9	1, 3, 4, 6, 8	1, 2, 4, 5, 7, 9 (*marginal)
Not Used	3, 8	2	--	--

The principles found to be most relevant to specifically consider within the assessment phase were ***principles 1, 5, 6,*** and ***7***. To a limited extent, there was some support to also include ***principles 2, 4,*** and ***9*** within this phase. During the planning phase, ***principles 1, 3, 4, 5,*** and ***6*** were deemed most important to consider, whereas ***principles 7, 8,*** and ***9*** also received modest support. The principles thought to be most important during the implementation phase were ***principles 2, 5, 7,*** and ***9*** as well as moderate support for ***principles 1, 3, 4, 6,*** and ***8***. The most relevant principles to consider within the evaluation phase were ***principles 3, 6,*** and ***8*** as well as marginal support for ***principles 1, 2, 4, 5, 7,*** and ***9***. Together, this information provided the outline necessary

for future heart health promotion program design thereby fulfilling the second purpose towards the completion of this thesis.

Interesting discrepancies evolved as current perspectives prevail over the seemingly innovative perspectives of the past programs. The historical analysis provided a fantastic insight into the actual operation of heart health initiatives while the expert respondents allowed for contemporary considerations in the use of current and future program design. Further to this, the following section will discuss the practical considerations deemed important to include in the constructs of a successful heart health promotion program. The culmination of this thesis will be recognized in the discussion chapter which will provide a complete juxtaposition of the information collected regarding the validity of the health promotion principles, the necessary emphasis of the principles in the program phases, along with the consolidation of the practical elements identified as being crucial to program fulfillment.

Part Three: Practical Considerations

Introduction

This first section of the questionnaire was intended to focus the respondents' attention on issues specifically related to heart health as well as to elicit their beliefs about the nature of the practical development of heart health promotion programs. Respondents were asked to formulate their comments exclusively on the basis of their personal experiences and without influence as a consequence of reading the remaining inquiries within the questionnaire. The intent of this type of question was to obtain a degree of personally constructed insights with respect to the nature and type of practical elements important in the creation of a heart health promotion program.

The question, as stated, asked the respondents ***"from their experience, list the important and necessary components of a community-based heart health promotion program in terms of the assessment, planning, implementation, and evaluation phases".*** A few examples were provided to help initiate the process. These were stated as follows, ***"This may include such concepts as needs assessment, theoretical basis, various strategies, funding, organization, etc."***

The data collected is provided in the following sections organized under each program phase. Analysis of the respondents' perspective will be incorporated by means of a juxtaposition with the information gleaned from the three historical programs of North Karelia, Coalfields, and Pawtucket. The conclusion will provide a summary of results.

Assessment Phase

This phase sets the stage for program planning. It consists of, among other factors, collecting the formal information of baseline variables specific to heart health issues, demographic information, and community resource information leading to an identification of the target group. As well, an informal assessment regarding the opinion leaders of the community will form a critical part of this process. These factors together are euphemistically known as "learning about the community". The following section will be organized into three parts. First there will be a compilation of the respondents' perspectives. The next section will discuss the practical components utilized in the historical programs as compared with the respondents' views. The last section will discuss the summation of inferences that arise.

Respondents' Perspectives

The respondents provided some interesting insight into the assessment phase components of a heart health promotion program. Three strong concepts emerged: community involvement in determining the type of data collected, consultation with the community regarding the development of program priorities, and a participation in planning a comprehensive needs assessment.

The majority of respondents stated that the assessment process must involve the community. It was their perception that community involvement was critical to the ultimate success of the heart health promotion program. Such a process must include communication with the community members to obtain information considered to be

relevant to them. This would lead into the second critical component of involving the community in the establishment of program priorities.

The first important practical component within the assessment phase of a heart health promotion program was the collection of data in discussion with community members. It was felt that obtaining data relevant to and representative of the target populations was extremely important. One respondent stated that a priority must be made to collect the information essential to understanding the scope of heart health issues within the community context. Such an undertaking would help to validate and legitimize the program within the community.

While regional and national statistics were important factors to consider when developing a health promotion program, one respondent suggested that local information obtained from within their community would help to bring to the forefront those issues that were relevant and important to the target community at large. This forms one component of local input into the nature of the information that would be gathered.

Second, the involvement of the community in data collection should also include direct consultation with community members in the development of program priorities. It was strongly suggested that community input and advice was a necessary component in the process of identifying and establishing the priorities for action. One respondent specifically stated that enlisting the support of and engaging the community was essential for the early development of the program plan. With respect to the significance of community leadership, one respondent suggested that by incorporating such people as full-fledged members of the assessment process, they could serve as program advocates and help to introduce the program into the community. These members would also play a

valuable role in identifying needs within the community, designing the program, identifying the target audience, implementing, and evaluating the program. Respondents were unanimous in their belief that program success, the validity and reliability of future comparative analysis and program evaluation would depend on accurate and credible information collected within this phase. Community input, support, participation, advice, and commitment was seen as an integral part of the assessment process. Moreover, it could help to ensure future success of the program.

The third concept of the assessment phase was the development of a comprehensive needs assessment. There was unanimous support for this among all seven of the respondents. They stated that a needs assessment was of critical importance in laying the foundation for a successful heart health promotion program. The respondents indicated that the initial community involvement component of the assessment process must be supplemented with the inclusion of other documentation considered by the community to be necessary to make the needs assessment more accurate and complete. Factors thought to be important in the development of a needs assessment were as follows: basic epidemiological information of cardiovascular disease and risk factor prevalence; available resources (space, upper level commitment, funding, etc); community readiness; and the community profile. The "community profile" term was used to denote diversity, community structure, socio-demographics, community methods of decision-making, local politics and leadership history, history of other health promotion initiatives, and other community needs (including economic needs). Another factor that could be included in the community profile is an assessment of competing interests.

Interestingly, three respondents added other components that seem critical to the success of the needs assessment, but were not specifically addressed by the other respondents. One stated that it was important to have a strong knowledge on how to conduct the needs assessment and to ensure that the program is designed to allow for the ability to act upon the feedback. The second respondent felt that information should be presented in a manner that is understood by community members as well as professionals. This would help clarify uncertainties and help everyone involved to remain focussed and clear about the issues at hand. Lastly, the third respondent spoke from a project management perspective and stated that it is at this stage that the theoretical models and conceptualization of potential interventions need to be discussed at the Project team level in preparation for the planning phase. Incorporating these factors together would help to forge a strong foundation for the next phase – the program planning phase.

Practical Components of the Historical Programs

North Karelia program planners combined the assessment and planning phases. The assessment portion of this project consisted of collecting information on the epidemiological data from the area. This included morbidity and mortality rates of the total population and specific subgroups. The prevalence rates were also extrapolated from this information. Additional preparatory information included the features of geographical area, demography, and the socioeconomic factors of community. For purposes of planning the interventions, information on various lifestyles, community features influencing these behaviors, community leadership, social interaction and community channels, and other relevant factors related to the social or behavioral

theories were assessed. During this time, there was a strong belief that the success of the program depended on the support of the population. Therefore, information was obtained on how people viewed the problem and how they felt about the possibilities of solving them. Local decision-makers and health personnel were approached to ensure their cooperation. Lastly, community resources and service structures were considered before deciding on actual forms of program implementation.

Pawtucket, however, spent an entire year collecting baseline information on the prevalence of risk factors and recruiting volunteers and community leaders to implement program interventions.

In Coalfields, an action group asked that a needs survey be undertaken to identify the community's particular needs and to assist with the development of a culturally sensitive health promotion program. The goals of their needs assessment were to collect information on the perceived importance of heart disease in relation to other health problems, to discover the depth of concern for heart disease in relation to other social concerns, and to estimate the impact of past health promotion activities. Interestingly though, much of the concern for heart health evolved out of a governmental priority to ascertain movement towards better health. One past initiative consisted of a group of community members, health workers, and a research group that chose to focus on raising awareness of heart health. From here, they petitioned for the development of a more comprehensive heart health program.

Comparison with Respondents' Perspective

In comparison to the respondents, the programs differed on various levels. First, as the respondents felt that a consultative/participatory effort was initially required in the

establishment of a program, both North Karelia and Coalfields evolved out of a limited degree of concern from community members. It was not until the "experts" became involved that the formal process of program development began. Pawtucket, however, was derived solely from the "expert" role perspective.

The needs assessment portion of these programs were quite different from respondents as well as between programs. In fact, it seems as though it was really only North Karelia, one of the first concerted efforts at a health program, that revolutionized health promotion program planning of the 1990's. Despite that their assessment phase was reported as being completely incorporated into the planning phase, a distinct effort was entailed (Puska et al, 1985). North Karelia planners were the most compliant with the suggestions of the respondents and furthermore included the greatest range of aspects in their assessment. On the other hand, Pawtucket utilized a very simple assessment which included only the risk factors. Since it was initially driven by expert involvement there was a heavy reliance on statistics collected on national and regional levels. It was not until the volunteers were recruited and after the first process evaluation that aspects and directions of the interventions were modified (Lefebvre, 1987 and Elder et al., 1993). As well, Coalfields' assessment included only an analysis of the prioritization of heart disease in the scheme of other issues. Based in the face of a government priority, national statistics, and a few concerned groups, the program was planned accordingly. This assessment merely heeded to cultural sensitivity and was also used to analyze the ranking of concerns among the people (Higginbotham et al., 1993). Overall, it seems as though North Karelia was far beyond its' time in the realization and ultimate evaluation benefits of a comprehensive assessment.

Summary

Overall, three strong concepts emerged as being critical in the assessment phase of program design: community participation in the identification of issues and subsequent data collection, community consultation in the development of priorities, and a comprehensive needs assessment.

First, there was general agreement between respondents that community involvement is imperative for success of the health promotion program. Active participation in identifying the type of data to be collected warrants an underlying understanding of the scope of heart health issues within the target community and would serve to validate and legitimize the program within the community. The future validity and reliability of the program would depend on accurate and credible information collected within this phase. Community input, support, participation, advice, and commitment was seen as an integral part of the assessment process.

Building from the active involvement of the community in the assessment phase, the second major practical consideration was the active recruitment and consultation with the community regarding the development of program priorities. The significance of such consultative efforts is that these community leaders would assist in the identification of relevant needs within the community and serve as advocates for program integration into the community.

Third, the practical component deemed a fundamental tool is the comprehensive needs assessment. The critical factors thought to be important in the development of a needs assessment were: epidemiological information of CVD and risk factor prevalence (local and national); available resources (space, levels of commitment, funding, etc);

community readiness; and the community profile (i.e. diversity, socio-demographics, decision-making capabilities, local politics, history of past health promotion initiatives, etc.).

Interestingly, the respondents and the past programs actively identified the necessity to establish a strong knowledge base from program inception. As well, there was a strong assertion that a theoretical basis from which the program would be guided needed to be determined.

According to the results of the analysis and the data from the respondents, the participation of the community in data collection and priority development along with the collection of numerous variables via a comprehensive needs assessment are integral to program success.

Planning

This phase identifies specific goals and objectives based on the information collected in the assessment phase. From here, the strategy and organization of interventions were planned for implementation in the next phase. The respondents were fairly uniform in their responses suggesting a degree of agreement of the important considerations within this phase.

Respondents' Perspective

There were three strong emphases that came out of the respondents' answers. First, there was an accentuation of the participatory relationship with all involved to establish goals and objectives. Second, three of the respondents felt that inclusion of a theoretical basis is important. Third, each respondent had several practical points of

consideration to include. A few outlying issues of interest were also cited and will be discussed. The following section will incorporate a comparison of the respondents' answers with the past programs of North Karelia, Pawtucket, and Coalfields.

Six of the seven respondents stated that clear goals and objectives need to be negotiated and identified among the partners involved at this stage and that this should be accomplished in a participatory/consultative manner. This would be essential to establishing a clear sense of ownership and lead to a greater understanding among all partners of the program development process. This would ultimately lead to a greater "buy-in" of community members.

Second, three respondents felt it necessary to state that a specific consideration be given to a strong literature review designed to ensure the emergence of a theoretical understanding of concepts such as behavior change, social learning, innovation-diffusion, and community development.

The practical elements of this phase centered on identification of strong leaders and supporters. It was found to be a necessary component where people knowledgeable in the planning process were identified to lead or facilitate or at least be accessible for support or input. Team members would be given definite roles and responsibilities and specific timelines would be instituted. Availability of personnel and continued support from superiors became essential in moving from the planning to the implementation phase. Further, at this stage, devising interventions related to the consideration of the information collected regarding community capacity, resources, skills and feasibility would have to be discussed. This would determine exactly what types of interventions could be effectively implemented.

Other thoughtful considerations included: the absolute necessity to have accurate and reliable information which is directly relevant to the target population, an understanding of the determinants of health (foundation of problems), and common sense. One respondent suggested that it was important to create an early success in order to demonstrate what the program can provide to the community. This would help to build trust among the program planners and target groups. Positive and trusting relationships were considered to be vital to program success. Additionally, another respondent suggested that at the project team level, there should be discussion about the feasible and reasonable evaluation mechanisms which fit with the kind of data collection required.

Having these components to consider in the planning phase, would guide the planners towards creating appropriate interventions (and evaluation schemas) ensuring the achievement of the program's mission. Assembled together and carefully adhered to, an organized and successful heart health promotion program could be attained.

Practical Components of the Historical Programs

In comparison, the major planning elements within the North Karelia project were: definition of objectives, establishment of project organization, and creating interventions (and the evaluation of them) (Puska et al., 1985). The planners combined the elements of the assessment and planning phases so that while the assessment was underway, much of the program organization was being done. Therefore, once the assessment was complete, it was only the interventions that needed developing as well as planning the system of evaluation.

Pawtucket utilized this phase to actually establish trial interventions within a three phase process (Lefebvre et al, 1987). All interventions were founded within the Social

Learning Theory and used various techniques. While the assessment surveys were being done, the intervention trial was beginning. The first phase of interventions targeted specific community groups (i.e. schools, workplaces, organizations). The second phase modified the interventions based on feedback and then introduced the program to the rest of the community. Phase three added more interventions and continued with the modification of the earlier interventions. As well, it was during this phase that the experts began to withdraw therefore initiating the sustainability of the program with the volunteers and relied on the community to maintain a degree of priority for heart health.

Coalfields' planners utilized the Protection Motivation Theory to develop their interventions (Higginbotham et al, 1999). They used the information found in the assessment phase to create interventions which were not only culturally sensitive, but also served to increase the level of importance attributed to heart health by the targeted community.

Comparison with Respondents' Perspective

The similarities between the respondents perspectives and the three programs reviewed in the literature were remarkable. In keeping with the respondents' suggestions, North Karelia had utilized a participatory type of process in the identification of goals and objectives. Key community members were involved from the beginning of the program development and utilized throughout as integral team members. Pawtucket differed dramatically because it was expert driven and expert created. The planners had incorporated the use of volunteers to assist with implementation, but the volunteers did not play a specific role in the development of the interventions. However, one of the primary goals of the program was to ultimately remove the role of the expert and to

transfer the program responsibility to the volunteers. Coalfields, as well, was primarily expert driven. This was due to the nature of the community and the social issues. Once the interest for heart health was initiated from the community, the planning was left to the experts so that theory-based interventions could be developed along with goals in keeping with the governmental priorities.

A theoretical basis was considered to be an important facet in the planning phase of a heart health program as per the respondents' answers. Pawtucket and Coalfields relied heavily upon theory to support and create their interventions. Pawtucket created multi-faceted behavior change interventions in keeping with the Social Learning Theory. Coalfields planners founded their interventions within the Protection Motivation Theory and created interventions that focussed on emphasizing the threat of the disease and the ease and ability of people to change their behaviors accordingly. North Karelia being a pioneer in community-based health program initiatives did not have the luxury of extensive theoretical foundation prior to program inception. Rather, a theory evolved and has served as a basis for analysis within other programs.

In comparison to the thoughtful considerations that arose from the respondents, the past programs also included interesting insights that were program specific. The respondents suggested that this phase needed to be reliant on the information collected in the assessment phase and secondly that the determinants of health needed to be recognized.

In comparison, the North Karelia project relied heavily on the information collected in the assessment phase of the program. The planning phase was particularly extensive for a project during this time period and involved survey information and

statistical data. Many factors were taken into account during the assessment phase and were addressed in the development of interventions (Puska et al., 1985). All interventions developed were multi-faceted and attempted to influence the knowledge, behavior and attitudes of the target community.

As well, the determinants of health were recognized albeit not specifically denoted until years later in subsequent evaluations (Vartiainen, 1994 and Salomaa, et al, 1996). For instance, major changes were incurred in the way health care was delivered and included the creation of more centers with a particular focus on heart health. All initiatives taken were strongly supported from all levels of government and community. This played an important role in the future success of this program and the influence it would have in the development of subsequent heart health promotion programs.

Pawtucket was founded to modify the risk factors within the stated population. Their planning was done based on the information collected through national statistics as well as risk factor surveys of the target population. Specific determinants of health were addressed, but on a much more reduced level as compared to North Karelia. For instance, the planners considered the influence of the environment and utilized already-established forms of support and icons of community cohesiveness (i.e. churches, organizations, workplaces).

The Coalfields project assessed the importance that the community placed on heart health and molded their interventions to incorporate a strong focus on increasing the public's awareness of heart health risk factors. This project was predicated on the significant influence of the government's past (and continuing) priority on health. This played an important role in the public's perception of the health promotion program. In

relation to the fostering an understanding of the determinants of health, no specific changes were made to the environment to reduce the levels of concern vis-à-vis the other issues. Rather, the emphasis was placed on increasing the relative perceived importance of heart health issues within the community.

Another point that the respondents suggested was crucial to incorporate in the planning phase was that of evaluation methods. All three programs placed a high degree of importance on both formative and summative evaluations as an integral part of the program design. North Karelia continues to generate fascinating consequences that have occurred over the extremely long term (Vartiainen, 1994 and Salomaa, et al, 1996). Pawtucket utilized phases for the introduction and continuation of their interventions. Although, in the long-term not enough funding has been available for evaluation, important information was obtained for the project's duration (i.e. success of the use of volunteers and the beginning of changes to risk factor profiles). Coalfields, as well, found evaluation to be an important criteria in a health promotion program. Their successes have been founded within specific statistical data of morbidity and mortality changes as well as increased awareness of heart health which can be attributed to the impact of their program (Higginbotham et al., 1999).

Summary

Overall, several components were found to be critical in the successful planing of the health promotion program. These were: the participatory relationship between all key stakeholders; the specific delineation of goals and objectives; inclusion of a theoretical basis to provide a foundation for developing interventions and program strategies; identification of a strong and knowledgeable leader; utilizing the information collected

within the assessment phase to ascertain accuracy in planning the program; inclusion of the determinants of health; and devising evaluation mechanisms.

Having these components to consider in the planning phase, would allow for the precise organization and direction of the program. This organization would lead to the development of appropriate interventions (and evaluation schemas) thereby ensuring the achievement of the program's goals.

Implementation

The phase constitutes the enactment of the previously planned interventions within their respective target population. It also includes a regular system of evaluation at each stage of implementation.

Respondents' Perspective

There were several points that were thought to be important in this phase that were brought forth by the respondents. They can be categorized into the following components: strong leadership, funding and support, capacity building, other key points i.e. flexible structures and a process evaluation plan.

Five of the seven respondents felt that a strong lead group and structure was important heading into the implementation phase. Having strong leadership with competent organization skills would allow for the establishment of protocols that would be used in the decision-making process (i.e. in terms of implementing the interventions and creating the evaluation process). A strong action plan would ensure that those involved shared a common vision and goals, help delineate clear roles and responsibilities, guide the allocation of resources, assist in the development of uniform

data collection methods for all demonstration sites, and create well-developed strategies which are sensitive to the population and environment. Together these factors would lay the foundation necessary for a successful heart health promotion program.

Another factor that was deemed important during this phase was securing adequate support for the program. This can be discussed from two perspectives. First, all the respondents felt that the program planners need to ensure adequate funding for the implementation of all planned strategies including evaluation requirements. Secondly, two of the respondents sated that support in the form of professional and moral support from superiors and facilitators was essential to ensure sustainability and soundness of the program interventions.

As well, during the intervention implementation itself, many of the respondents eluded to the idiom "capacity building". This term involves several factors, but the respondents considered it from three perspectives. First, those who are involved within the implementation of specific interventions i.e. volunteers and staff, need to be trained in the skills required to perform these interventions. Secondly, using existing organizations and community structures would make initiatives more sustainable. Lastly, the majority of respondents had stated the importance of including an evaluation process throughout the phases of a heart health promotion program.

During the implementation phase several factors were found to be important. It was felt that having a contingency plan with check points and indicators would allow for appropriate changes and modifications to take place to ensure interventions were achieving their short term goals. The most important consideration with process evaluation is that it needs to be performed in a timely fashion. The respondents felt that a

rapid feedback loop along with open sharing of information is necessary to perform an adequate process evaluation. After collecting the information, the changes that are deemed necessary need to be incorporated also in a timely manner. This suggested that the structures where the interventions were being implemented need to be flexible in nature and have the ability to respond to the changing needs of the program participants. Additionally, one respondent suggested that an alternate aspect that may contribute to intervention success is conducting the implementation plans in stages at a pace acceptable to community. Here the interventions can be modified according to prior utilization in the community in a "new generation" intervention as well as being sensitive to the needs of the target group.

Practical Components of the Historical Programs

North Karelia consisted of seven program objectives that led to the development of interventions. These interventions were also systematically delineated from the overall goals of the program and founded within a combination of several theories – community organization, behavior-change, communication-behavior change, and diffusion of innovation framework.

As per the respondents' suggestions, North Karelia began with a solid action plan. The program was action-oriented from the beginning and included a strong evaluation component and various opportunities for continued research. The original project was set for five years. They were led by a common vision and goal and the group that was created led the decision-making process confidently. It also included various perspectives from community representatives and experts. Once launched, the lead group worked closely with the participating agencies within the community. The roles and

responsibilities were clearly delineated and the allocation of resources were defined. A priority from the beginning was to ensure complete, uniform, and on-going data collection. Additionally, the strategies that were developed, although expert oriented, addressed the needs of the target community. This project was ideally organized from program initiation and the cohesiveness that ensued played a major factor in the future success within North Karelia.

As well, the necessary supports were established early within program organization. North Karelia had obtained strong support prior to program initiation. This included the Finnish Parliament, experts from World Health Organization, and community representatives and organizations. The planners included all aspects of support that ranged from monetary support (funding), to professional and expert support (moral and influential) and included a strong element of community support. This set the stage for a sustainable, long-term project with persistent opportunities for evaluation, future learning, and program development.

In terms of capacity building, North Karelia Planners were also pioneers in the use of volunteers and lay people to diffuse information throughout the population. In doing so, these opinion leaders helped to establish a normalcy of heart health behaviors and attitudes. The use of existing structures was also a priority. The program planner's understanding of the demographics of the peoples led them to use the existing structures more effectively. It was felt that this would provide an encouraging atmosphere rather than trying to convince the people to access other structures for support. The structural changes, reorganization of health services, and responsibilities of health workers would

not have been as successful if the people implementing the interventions were not flexible to some degree.

Since evaluation was considered an integral part of the entire planning process, complete formative evaluations were done and changes done in a timely manner. This is in keeping with the suggestions of the respondents. It is interesting to note that the North Karelia program consisted of so many of the same factors as suggested to by the respondents. One may venture to say that it was really the experience and success of North Karelia that actually influenced the development of future heart health programs.

Pawtucket program planners involved a very different approach. This approach was embodied within the concept that the consistent use of volunteers to implement the program would lead to population-wide changes and eventual sustainability of the program. The lead group consisted of experts who uniformly agreed that the use of a volunteer system was the most effective and feasible way to implement a heart health program. A community-activation orientation was maintained throughout the implementation. A full year was allocated to the assessment and planning phases. The strategies were well developed and strongly theory driven. An extensive tracking system was established to assist with process and summative evaluation. This allowed for consistent and uniform collection of data.

Pawtucket heart health program was founded with the concept of capacity building, as it is now known. The interventions were introduced in stages in keeping with the concepts within the theory. Phase one consisted of utilizing existing structures i.e. schools, workplaces, churches. The early adopters helped spread the word and spark interest in heart health. Through a feedback loop, the interventions were planned and

coordinated accordingly. The difficulty with this approach is that this process was very slow and laborious. It utilized more resources than originally planned and as a result, a different intervention evolved – program recognition campaigns. Phase two was initiated to complement the changes within the organizations while other interventions were being introduced within the community. In phase three, additional activities were implemented. This phase was most notable for the increase in individual and organizational participation.

Similarly, the heart health program in Coalfields was commencing after a long-standing appeal for support of health promoting activities and policies. It evolved out of initial health promoting efforts in the region and gathered support from community members, health workers, and a research group. Like the other programs, Coalfields project had included a community-based action group, but was primarily driven by "experts". They had clear goals and an organized approach. The added challenge arose out of the strong ethnic sensitivities that needed to be considered to ensure intervention success and appropriateness.

Capacity building was not a primary strategy chosen for this target group. The demographics and assessment dictated the type of interventions that would be better received. Therefore, the interventions implemented were founded within a protection motivation theory. Interventions centered on increasing awareness and knowledge to modify risk factors. The local community businesses and organizations were canvassed to support the actions of the program. This was thought to help in creating an atmosphere conducive to heart health behavior adoption and sustainability. Particular note was made to high risk individuals and those in socially disadvantaged groups.

The evaluation process consisted of determining the change within the risk behaviors and equity among intervention implementation and adoption. Other goals were directed to macro level changes. They had hoped to influence the incorporation of health promotion as a priority within all society sectors i.e. government, businesses, and organizations and recent 10-year evaluations suggest some movement in this direction.

Comparison with Respondents' Perspective

Overall, the respondents' suggestions correlated with the programs' (North Karelia, Pawtucket, and Coalfields) application. Despite marginal success in some areas and great success in other areas, the respondents' practical elements for a health promotion program were appropriate. A strong lead group was an integral part of that will determine future success of the heart health program. A cohesive, organized group with a common vision would ultimately lead to greater success of the program.

In terms of the interventions themselves, it seems that the manner in which the interventions were portrayed in the target community and the way the community responds would be the deciding factor in the success of the interventions. Therefore, it was of utmost importance to include an extensive feedback type process evaluation to ensure the interventions are working.

Utilizing existing structures served to eliminate the need to convince the people to use these resources as opposed to the ones that were already established. Additionally, it was cost effective. The structures though, must be able to change with the needs of the community and be involved to some degree within the program planning. This would ascertain sustainability and support for the program.

Summary

Overall, there were several practical components thought to be vital in the implementation phase that would influence program success. Derived from the respondents' answers and the comparison with the past programs utilization, the following were found to central to the success of the implementation phase. These were:

- Continued support from a strong leadership – the establishment of protocols relies on effective program management which would lead to organized and appropriate decision-making processes in terms of intervention implementation, resource allocation, and evaluation methodologies.

- Common vision – emphasis on this component is again reiterated in the implementation phase to ensure that those involved shared a common vision and goals. This augments program cohesiveness.

- Funding and support systems – likely ascertained in prior phases, funding and support structures are critical in defining the implementation and continuation of the program.

- capacity building – this term mainly referred to the necessity of adequate training and skill building of program implementers. As well, reference to capacity building is made regarding the use of existing organizations and community structures would make initiatives more sustainable.

- Process evaluation plan - a contingency plan with check points and indicators would allow for appropriate changes and modifications to take place to ensure interventions were achieving their short term goals. Integral within this evaluation consideration is the ability to institute the required changes in a timely fashion to meet changing needs of participants.. Flexibility and adaptability of interventions and programmers are crucial.

Therefore, giving heeded consideration to the above components would attest to the successful implementation of program strategies and interventions.

Evaluation

This phase entails a process and summative focus. The process evaluation was done at various intervals of the implementation phase to ensure appropriateness and to determine, to a degree, intervention effectiveness. Summative evaluations included the impact and outcome effects. Impact evaluations were done at program completion to measure the level or degree of achievement of goals and objectives. Outcome evaluation consisted of longitudinal effects and may include variables such as quality of life, cost, and other out of scope changes.

Respondents' Perspective

The respondents were uniform in their suggestions that evaluation be made an integral part of the health promotion program, but that unless very long-term resources were obtained, the long-term mortality and morbidity statistics were difficult to discover. The specific components thought necessary within this phase were as follows: evaluation strategy considerations, reporting back to the community, relevant data collection, and indicators of goal and objective achievement.

All of the respondent's contributed advice on the important components of the evaluation phase. The first category of components centered on general planning of evaluation strategies. Although only explicitly stated by one respondent, the assumption was clear that strategies should be planned prior to this phase, likely in the assessment and planning phases. In accordance with this, it was felt that the evaluation rigor should be suited to the intervention rigor. For instance, this suggests that with each program, it is appropriate to spend a relative amount. Additionally, the respondents felt that in

performing the evaluation it was important to have access to the use of multiple methods of analysis (i.e. qualitative and quantitative). This would help to ensure that the data deemed important to collect could be analyses from different perspectives to allow for a more comprehensive evaluation. Other considerations included creating an easy-to-complete tool and understandable reports. As well, it was important to consider the response burden on the program people. This needed to be accommodated for in the planning of strategies.

Following this, two respondents felt strongly that when planning the evaluation strategies, it was important to involve a participatory approach among all those involved. This included all the team members (i.e. funders, community, investigators. etc). As well, it was important to have access to expertise in the planning, implementation, and analysis. This would ensure the appropriateness of the planned strategy, accurate implementation of the strategies, and precise analysis.

In keeping with the participatory approach, the next important component to consider was the reporting of information to the community. This specifically involved a feedback loop to team members and the community in a rapid, frequent, and consistent manner. The purpose of this process was to provide validation of the interpreted data. In terms of the process evaluation this would allow for the appropriate modifications to be incorporated. In terms of outcome evaluation this would serve to corroborate the conclusions.

During the implementation of the evaluation, the respondents felt that the information collected and the type of analysis done needed to be practical and useful to the program planners and implementers. The information and suggestions made by these

groups were integral to successful intervention implementation. One respondent stated that in considering the relevance of the information collected, the program planners encouraged each of the demonstration sites to identify what was learned from their individual projects. This would allow for a sense of ownership and value towards the goals and future sustainability of the program.

Lastly, the expectations of an evaluation needed to be understood by each team member and the target group. This means that there needed to be clear indicators and timelines for goals and objectives to be achieved. For instance, it was important to ensure that everyone understood that an outcome evaluation would be very long-term and may take longer to manifest itself than the original operation of the program. Those factors that would take many years before noting any significant outcomes were factors such as social change and mortality/morbidity statistics. Whereas, risk factors change could be discovered in short-term and in the long term. Another consideration was that funding for evaluation and ongoing feedback and monitoring needed to be established early within program planning.

Overall, the respondents suggested many interesting components and factors necessary to include in the evaluation phase. Practical considerations included points such as evaluation rigor respective of program rigor which contain evaluation tools which are easy to understand, collect necessary information, and allow for rapid feedback. As well, it was deemed very important to ensure open communication and participation between evaluators, implementers, and the community. This consisted of the collection of relevant information and a clear understanding of the objectives, goals, and timelines. Together these factors would contribute to the success of the evaluation phase.

Practical Components of the Historical Program

North Karelia was initially designed with the goal of decreasing risk factor behaviors. However, a strong component of the program was to ensure continued research opportunities. Therefore, program planners designed an extensive evaluation plan into the project components. This included process and impact evaluation. Therefore comprehensive assessment and baseline measurements were collected.

The tools used were primarily in survey formats. The participation rates were statistically acceptable as the peoples in the community had indicated a priority on health and were involved in initiating the heart health program. Additionally, the government maintained an interest in various elements of health (i.e. socioeconomic groups, disability costs, healthcare costs, etc.) and so the program could utilize data that was collected from these organizations as well for statistical analysis.

During process evaluation, the feedback was done promptly and changes were made accordingly. The evaluation information collected was not specifically discussed with the community except to indicate the success of the program at various intervals. However, program implementers were actively involved.

The goals and objectives were consistent and clear throughout the program and the evaluation was done to determine their achievement, feasibility, and effects. Additional information was collected for different groups of stakeholders. For instance information on cost benefit analysis and program sustainability was important for funders and government members while information on participation and risk factor change was important for program implementers. Community members were primarily interested in their own perceptions of enhanced health and wellbeing and enjoyed the comparison in

statistical rates with the reference area. The most intriguing component was the fact that 10- and 20- year evaluations were done to determine long term effects including program sustainability, mortality and morbidity factors, prolonged risk factor changes, and cost analysis. This program was a colossal success in numerous ways and continues to be an area of research opportunities into expanded practice.

The Pawtucket program was established to decrease the incidence of CVD by modifying risk factors and utilizing a volunteer system to ascertain sustainability of the program. Both process and summative evaluations were done. The information was primarily collected through the participants' use of a "contact card" that recorded the participation rates and demographic information of the people. Additionally, interviews were done with selected participants.

These methods of evaluation were chosen to ensure intervention suitability and timely response to suggestions for change. There was extensive planning that went into the evaluation tools and these were established from program initiation. The information that was collected was not openly discussed with participants, but program planners and implementers were involved.

The objectives and goals were clearly maintained throughout the program. The program operated for several years and this contributed to the interventions being modified according to participants' stage of change. Process evaluations were key to this proceeding. As well, due to the long period of time that the program was funded for and that the interventions were introduced in phases, the longer-term outcomes could be discovered. For instance, there was enough information and time to determine linkages

between community organizations, sustainability, and impact of the concept of heart health and wellbeing into the community.

The Coalfields project was also created out of a concern for the increasing incidence of CVD. The objectives were both risk factor oriented and broad in spectrum and included various policy and governmental changes. The entire project was very much expertise oriented and this was in keeping with the culturally sensitive information found in the assessment phase.

Despite the relative short term funding commitment, notable successes were achieved especially in risk factor behavior changes. The data was primarily collected in a survey format, but the evaluators also capitalized on statistical information the government was collecting as well. There was also attainment to a certain degree of the broader goals delineated in the beginning determined through the development of the National Better Health Program. Interestingly, the program planners found that more benefit was noted in areas where health promoting activities were already established, therefore, funding was reallocated to these areas. There was only minimal communication to the target community in terms of the results of analysis.

The goals and objectives were specifically delineated from the beginning. The objectives were very clear in wanting to determine the impact of initiatives in terms of CVD statistics, the number and range of activities available and utilized, and integration into existing community structures. Both process and summative evaluations indicated a considerable success in the achievement of these objectives. The heart health messages had infiltrated all societal sectors and subsequent increases in participation rates were depicted. Additionally, the CHHB found that local initiatives were successfully being

integrated into the entire community (i.e. school heart health programs involving multi-sectors). Fortunately, the CHHB has the sustained support from the upper levels of government and the eventual determination of long-term outcomes such as program sustainability, structural changes, and risk factor reduction will be addressed.

Comparison with Respondents' Perspective

It is interesting to note that of all the program phases, the past health promotion programs and the respondent's perception were remarkably similar within the evaluation phase. The strategies that were undertaken may have been geared for different types of information to be collected, but the underlying strategy was similar throughout. The privilege of time has allowed respondents to specifically delineate strategies and describe necessary components within their programs. Additionally, in times of fiscal constraints the focus on moneys and the allocation of it became more critical. Therefore, better methods and specifically stated indicators were needed to ascertain the funders would obtain the information they desired. It seems, though, that North Karelia was ahead of their time in establishing strong goals. The intention of the designers was to establish and maintain evaluation and research opportunities at every stage and this was definitely achieved. Meanwhile, Pawtucket and Coalfields were able to capitalize on the past performances of projects and perform relevant and significant evaluations. Following the advice of those currently in the field of health promotion and learning from the experience of past successful heart health programs, future programs should be created in such a way that a careful evaluation of the impact of the program can be determined with respect to broad changes against CVD.

Summary

In all, the respondents and the past programs noted several key points to consider when implementing an evaluation strategy. These consisted of:

- Specific planning of evaluation strategies – The most successful evaluations are built on the types of baseline information collected in the assessment phase. As well, the use of multiple methods of analysis will allow for a comprehensive evaluation. It is at this time that the practicality and logistics of the tool must be considered.

- Access to expertise in the planning, implementation, and analysis will ensure the appropriateness of the planned strategies, accurate implementation of the strategies, and precise analysis.

- Reporting of results - Many respondents also suggested that the evaluation reports must be comprehendible to the various stakeholders so that the interpreted data can be validated and relevant.

- Clear indicators of goal and objective achievement - Clear indicators and timelines for goals and objectives need to be established (including financial support). As well, an understanding of the long-term commitment necessary is critical.

Overall, the evaluation phase has a plethora of issues and considerations. What determines a successful evaluation strategy are the above stated points, however, it is vital that this strategy is fully planned early in the program.

Chapter Nine: Discussion

Introduction

Cardiovascular disease (CVD) remains a leading cause of death and disability in North America. The rising costs in terms of life lost, disability, and health care are immense as chronic diseases such as atherosclerosis take a commanding lead over acute forms of death and illness. The serious burden of these diseases spurred action to identify the factors that contribute to them and to determine methods of preventing these factors from generating an even greater health impact. Research indicated the multi-factoral nature of CVD in terms of individual behaviors, physical and social environment. These factors along with government policies and structures, economic circumstances, and organizational structures, all contribute to the rise in numbers of people afflicted. As a consequence of this research, a new method of battling against this disease evolved. It began with prevention strategies which centered around individual behavior, but as time progressed, a renewed focus on disease prevention developed – this was called health promotion the scope of which encompassed community action, changes in the individual behaviors, reorienting health services, establishing new public policies, and creating supportive environments. Interventions were directed at instituting widespread changes in personal behaviors and the community life which had a link to the growth of CVD..

The purpose of this thesis was to identify the principles that form the basis of health promotion; to ascertain the nature of the organization and emphasis of the health promotion principles within a general community-based heart health promotion program design; and to suggest the practical components deemed necessary to establish a viable, functioning heart health promotion program. To accomplish this, three deliberate actions

were taken. The first step was a delineation of the health promotion principles. Second, these principles were used as a basis in the analysis of three past heart health programs. Next, a questionnaire was devised to obtain current heart health expert opinion as to the accuracy of the identified principles and the emphasis that should be placed on these in establishing a heart health promotion program. The opportunity was also given for the respondents to offer specific practical considerations for the application of these principles. The information collected was analyzed by comparing it to the historical experience of the three well recognized programs of North Karelia, Pawtucket, and Coalfields. Together, this information was used to suggest a general model for future health professionals to follow when designing a comprehensive heart health promotion program.

Health Promotion Principles

Health promotion, as a concept, has evolved over the years and incorporated many perspectives ranging from behavioral changes to the creation of healthy public policy. Since the early 1970's much work has been done in solidifying the fundamental elements of the definition of health promotion. However, the applicability of the concept of health promotion remains somewhat of an uncertainty.

The foundation of this thesis relied upon the accurate delineation and description of the health promotion principles. In doing so, a comprehensive analysis of several key documents was required and the outcome was the identification of nine health promotion principles. These principles served as the basis for the description and analysis of three past programs, the creation of a questionnaire on heart health promotion, and outline for use in heart health promotion program design. These principles were initially stated as:

1. **Health Promotion** recognizes individual, social, and environmental factors interacting to influence health.

2. **Health Promotion** supports a "holistic" approach in which the physical, mental, social, ecological, cultural, and spiritual aspects of health are recognized.

3. **Health Promotion** requires a long-term perspective. Time and support are necessary to create awareness and build understanding of the health determinants within individuals, communities, and organizations.

4. **Health Promotion** necessitates a balance between central and decentralized decision-making on policies that affect people's lives where they reside, in leisure, and work.

5. **Health Promotion** depends on a degree of multi-sectoral involvement including support of the community, organizations, businesses, and policy sectors. It bases its practice in the need to have similar values and vision of a preferred future.

6. **Health Promotion** must draw on knowledge from social, economic, political, medical, and environmental sciences as well as on experiential knowledge.

7. **Health Promotion** utilizes the concept of empowerment as an important strategy in achieving long-term changes and sustainability of programs.

8. **Health Promotion** emphasizes public accountability for costs, activities, and effects

9. **Health Promotion** advocates healthy public policy.

A pilot study of the questionnaire was conducted, changes suggested were incorporated, and a list of ten potential Canadian experts in the area of her health programming were identified. These experts were contacted to determine if they would assist in the study by completing the questionnaire. Seven agreed to participate. Following an analysis of responses of these experts, some modifications were necessary in order to place added emphasis or to enhance the clarity of the principle.

Principle One – No change

Principle Two – added the phrase *and affected in the pursuit of health*. This would allow for elaboration and inclusion of the definitions of health and health promotion.

Health Promotion supports a holistic approach in which the physical, mental, social, ecological, cultural, and spiritual aspects of health are recognized *and affected in the pursuit of health.*

Principle Three – the changes that were suggested led to clarification of the principle in terms of emphasizing the concepts of timing and support.

Health Promotion *represents* a long-term perspective *that requires* support and time to create awareness and build understanding of the health determinants within individuals, communities, and organizations.

Principle Four – The change made was to clarify the intent of the word *balance*.

Health Promotion necessitates a *collaboration and participation* between central and decentralized decision-making on policies that affect people's lives where they reside, in leisure and work".

Principle Five – No change

Principle Six – No change

Principle Seven - No change

Principle Eight - No change

Principle Nine - No change

Six of the nine principles required no changes as a result of the survey of the heart health promotion experts. Of the remaining three, the revisions did not alter the fundamental meaning of the principle. Rather, the comments served to exemplify the underlying intention and allowed for enhanced clarification of the principles. Overall, the comments helped to add insight into the further development and usage of these health promotion principles.

The next step was to compare the respondents' perceptions regarding the incorporation of the principles into health promotion programs with the information gathered from the analysis of three past heart health promotion programs. In conjunction with this, the practical considerations were identified to solidify the usage of the principle when designing a heart health promotion program. The outcome was a juxtaposition of these components – respondents' opinions as compared to the operationalization of these principles in the three past programs including the practical considerations.

Organization of Principles into Phases and the Practical Considerations

In general, any program design involves four phases – Assessment, Planning, Implementation, and Evaluation.

The next section will provide a summary of results found in the analysis of the emphasis of the health promotion principles as well as the their organization into the phases (See Table 16).

Table 16: Principle Organization – A Summation of Results

	ASSESSMENT	PLANNING	IMPLEMENTATION	EVALUATION
Most Important	1, 5, 6, 7	1, 3, 4, 5, 6	2, 5, 7, 9	3, 6, 8
Somewhat Important	2, 4, 9	7, 8, 9	1, 3, 4, 6, 8	1, 2, 4, 5, 7, 9 (*marginal)
Not Used	3, 8	2	--	--

Assessment Phase

The **assessment phase** commonly involves components such as a community analyses which entails collecting pertinent information regarding the target group, statistics, and recruiting participation from community leaders. This phase ultimately sets the stage for program planning. The principles most closely associated with this process were principles one, five, six, and seven.

Principle one served as a general basis into which many social theories have been incorporated to assist programmers to focus on the interaction of the identified elements (individual, social, and environment). Recognition of these relationships help to ensure the identification of community deficits and resources and thus promoted the planning of an effective and appropriate health promotion program. Amongst the respondents there was a strong assertion that a theoretical basis to guide the assessment phase needed to be determined. Elements of a number of overlapping theories provide the framework within which effective programs are executed (Fincham, 1992 and Hyndman et al., 1993). Examples of these included Social Learning Theory, Protection Motivation Theory, and Community Activation Theory.

The factors that were often included in a comprehensive needs assessment were: mortality and morbidity statistics, epidemiological information; risk factor prevalence; resource availability (space, levels of commitment, funding, etc); and the community profile (i.e. diversity, socio-demographics, decision-making capabilities, local politics, history of past health promotion initiatives, etc.) (Proceedings, 1988 and Green & Kreuter, 1997). Furthermore, several of the respondents as well as key designers of the North Karelia project felt that it could be at this level where the involvement from the

community itself would shed light on additional variables that might need to be considered. The significance of such consultative efforts is that these community leaders would assist in the identification of relevant needs within the community and serve as advocates for program integration into the community (Glanz, Lewis, and Rimer, 1997 and Bracht, 1999).

Principle five incorporates the assumption that including various sectors of the community will enhance the impact of the program. By assessing the need and potential for the establishment of collaborations and partnerships early on in a health promotion program, it was possible to create more effective intervention strategies (Paper on Population Health, 1994 and Canadian Public Health Association, 1996). The respondents and the authors of the past programs all suggested that for pragmatic purposes, it was necessary to elicit active participation in identifying the type of data to be collected. The future validity and reliability of the program would depend on accurate and credible information collected within this phase. Community input, support, participation, advice, and commitment was seen as an integral part of the assessment process. active recruitment.

Principle six suggests that to combat the effects of a diverse and multi-faceted disease, a broad knowledge base must be utilized. This broad base would allow for the assessment and identification of the numerous and compounding variables. The respondents and the authors of the past programs noted the importance of establishing a strong knowledge base from program inception.

Empowerment (**principle seven**) was seen as critical during this phase in order to facilitate the growth and development of the program in order to maximize the

involvement of the target community and to enhance the likelihood of goal achievement. The respondents did not identify any pragmatic considerations with respect to the concept of empowerment. This concept has been largely identified in the literature as significant in health promotion program design. The majority of Canadian experts agreed that the principle of empowerment should be incorporated into the assessment phase. It was considered to be important in program sustainability and long-term maintenance of the heart health initiatives.

To a lesser extent principles two, four, and nine could be considered in this phase of design. These principles contribute a broader perspective and emphasis on the shared participation and decision-making capacity of the community. Principles three and eight were not emphasized at this juncture.

Planning Phase

The **planning phase** usually incorporates such aspects as organizing the program, soliciting support, delineating goals and objectives, setting priorities, and developing strategies and interventions. The data suggested that principles one, three, four, five, and six were of particular importance in the designing of a program.

Principle one builds primarily on the information collected in the assessment phase. The practical insight that was suggested was the importance of adopting a theoretical basis to provide a foundation for developing interventions and program strategies. Theory helps to provide direction and clarity to goals as well as aids in the development of structure. Moreover, a combination of theories are fundamental in the development of effective interventions, particularly those that not only combine the

strategies to effect change on the individual level, but those that permit a focus on a wide spectrum of levels – individual, organizational, community, societal, etc.

Principle three ensures that an expanded definition of health is considered and the subsequent determinants of health are recognized and incorporated in the planning of strategies. There was not a specific practical consideration suggested, however, the respondents confirmed the value of including this perspectives in the planning of program strategies and interventions. Recognizing the multiple factors that influence health and instilling these realizations as a basis for the interventions will promote the far-reaching effects of heart health promotion. Five of the seven respondents supported the incorporation of this principle within the planning phase.

Principle four accentuates the need for participation amongst the experts and the community to ensure the program is meaningful. The practicalities were not specifically addressed, but there was general consensus that the participatory relationship between all key stakeholders was critical during the planning phase.

Principles five and **six** conjoined suggest that using multi-sectors along with multi-disciplines would ensure comprehensive planning and that collaboration would foster new program initiatives.

There was also moderate support indicated for principles seven, eight, and nine. **Principle seven** asserts that the utilization of an empowerment approach would ultimately contribute to long-term maintenance and institutionalization of the program. Comparatively, incorporating **principle eight** suggested that accountability would be maintained at the forefront when establishing evaluation variables. The inclusion of **principle nine** as important in this phase suggested that a global perspective would be

maintained for future initiatives. No support was indicated for principle two. This might be attributed to the ambiguous meaning regarding concepts such as holistic.

Other considerations found to be important to include in this phase and that were not addressed by the assumptions of the principles were: specifically delineating goals and objectives; early identification of a strong and knowledgeable core planning group or leader; developing an organizational structure of the program; clarifying roles and responsibilities; utilizing the information collected within the assessment phase to ascertain accuracy in planning the program; training of intervention implementers; and devising evaluation mechanisms. These design aspects are key elements that the respondents stated would contribute to program success.

Implementation

The **implementation phase** consists of the actual performance of planned interventions and program strategies. The analysis found that principles two, five, seven, and nine were most instrumental during this phase.

Principle two denotes the importance of devoting attention to the interaction effect of the components which form the spheres of health. A sound implementation phase must account for such interactions. Five of the seven respondents noted that it was important to stress this principle. **Principles five** asserts that to implement the comprehensive strategies developed in the planning phase, utilizing the different sectors was crucial. Six of the seven experts agreed on the importance of this principle. **Principle seven** was supported by six of the seven Canadian experts and was emphasized to indicate the importance of strengthening of skills and capacity building within the community itself. Taken together, these two principles would provide the foundation for

a health promotion programs that would be supported within the community. Moderate support for the remaining principles suggest that several components need to be recognized in the implementing of interventions. As well, the experts stressed that the decision-making capacity within the program must be maintained and understood.

Overall, there were several other practical components thought to be vital in the implementation phase that would influence program success, but were not encompassed in the principles. For instance, the analysis yielded five logistics of program implementation. These included the need for on-going guidance from the strong leadership group, continuous reaffirmation of the common vision, securing of adequate funding and support for program initiatives, and a fully funded, inclusive evaluation process of both formative and summative in nature.

Continued support from a strong leadership would have culminated in the establishment of protocols in earlier phases of the heart health promotion program. These protocols would serve as a basis for effective program management. It was strongly contended that an organized and appropriate decision-making process regarding several program issues such as intervention implementation strategies, resource allocation, and evaluation methodologies would be a critical component to ensuring the successful implementation and operation of the health promotion program. Revisiting the mission statement of the program would help to reaffirm the direction towards goal achievement and as well as to enhance program cohesiveness. Reference to capacity building was made regarding the use of existing organizations and community structures to make initiatives more sustainable. Additionally, the necessity of providing adequate training and skill building of program implementers was emphasized. Lastly, the methods of

process evaluation must be thoughtfully established. There must be a procedures set in place to ensure that interventions are achieved with respect to both short- and long-term goals. Integral within this point is the ability of the program implementers to institute the required changes in a timely fashion to meet changing needs of participants. Flexibility and adaptability of the designers and the interventions are crucial to program success.

Evaluation

The **evaluation phase** was associated with determining the efficacy of the interventions. Such evaluation procedures should be identified prior to or during the program implementation phase. This would permit the programmers to make any necessary adjustments as well as at the termination of the program to enable the determination of the success and failures of the interventions and achievement of goals at program completion. Supplementary to the determination of intervention success, are issues of program durability in terms of sustainability, and long-term institutionalization (Bracht, 1999). This phase is extremely complex as the priorities and variables that are important are determined from program outset. **Principles three, six**, and **eight** were found to be most significant to consider.

The combination of the principles suggest that a long-term perspective is ideal in order to implement and maintain the many changes that may not be recognized until well after the program's initial timelines. As well, for meaningful and relevant evaluation reports it is critical to incorporate a wide knowledge base. Principle eight stated that the outcomes of the evaluation would serve as the evidence for accountability to the numerous stakeholders. All seven of Canadian experts concurred with the significance of this principle.

In all, the respondents and the past programs depicted several key points to consider when implementing an evaluation strategy. These consisted of specific and direct planning of evaluation strategies, the importance of an expert knowledge base to help ensure the evaluation phase was accurate and relevant, and that clear indicators of goal and objective achievement were set in place at program outset.

There were strong proponents regarding the evaluation phase components. The majority of respondents and all past programs included very deliberate preparation of evaluation strategies. It was emphasized that the most successful evaluations were built on the baseline information collected in the assessment phase. In keeping with the perspective of an organized and purposeful evaluation phase, expert leadership was considered to be crucial in the planning, implementing, and analyzing of data. This would ensure the appropriateness of the planned strategies, accurate implementation of the strategies, and precise analysis. As well, the use of multiple methods of analysis would allow for a comprehensive evaluation. Once evaluated, the reporting of results was indicated as a concern amongst the respondents. The suggestion was made that the evaluation reports must be comprehendible, applicable, and relevant to the recipients of the information (i.e. funders, community, politicians, businesses, etc.). In order to do this, clear indicators of goal and objective achievement must be established. In regards to this, there must also be a distinct and built in understanding that certain relationships and changes are not recognized until several years after termination of the program. Even seemingly insignificant early changes can be indicators of future success. Therefore, a long-term commitment to programs is critical.

Issues of durability refer to the continuation of program activities after initial researchers have left the community (Brown 1991, Glanz & Lewis, 1997, and Bracht, 1999). The crux of these is the creation of an infrastructure or community capacity to designed to maintain ongoing program operation.

Overall, the evaluation phase encompasses a plethora of issues and considerations. What determines a successful evaluation is a concentrated effort designed to address the above stated points as well as those outlined in earlier sections dealing with the development of strategies in program design.

Summary

In all, it would seem that for the creation of a successful comprehensive heart health promotion program, several health promotion principles and pragmatic considerations are integral to ensuring program effectiveness. The assessment phase is a comprehensive process of analysis and understanding of the target community. Pertinent information includes risk factor components, identification of needs, community history, resources, cultural norms, collaboration potential between different sectors, and theoretical basis determination. It was suggested that results would reveal an enormous amount of data which would serve not only to guide the planning of the program, but also to provide a baseline for future evaluation efforts. The planning phase consists of varying emphasis on almost all the principles directed at organizing the program and in the development of strategies. The implementation phase emerges from the planning phase and performs the necessary actions required to attain the goals of the program while recognizing broad based assumptions regarding the eventual sustainability and institutionalization of the program. The evaluation phase has the potential to provide

extensive information. This phase is most advantageous in determining the ultimate success of the program as the effects of the program are explicitly defined (i.e. short- and long-term, narrow and broad effects). It is during this phase that the solid foundation of the program is established, interventions are assimilated, and where community ownership prevails and expert withdrawal from the program transpires.

In reference to heart health, there are no step-by-step processes in designing a comprehensive health promotion program. Rather, following the general premise of the program phases, and the associated elements, as well as supporting the perspectives of the health promotion principles will advance the efforts in reducing the detrimental effects of CVD.

Conclusions

Several conclusions were derived from this study. In terms of the legitimacy of the nine health promotion principles, it could be concluded that the principles were substantiated by the literature and the expert responses. It was found that these principles were important in securing and maintaining a common vision, together with building an understanding of the perspective of health promotion in program design. The utilization of these elements was determined to be integral in the development of a successful heart health promotion program and to serve as a guide for future program design.

In terms of the organization of the principles within the program phases, several conclusions could be drawn. For instance, varying degrees of emphasis were placed on the principles within the different phases. Ideally, the principles would be carefully addressed throughout the phases, but due to the practical reality, feasibility, and for utility purposes prioritization was considered to be a necessity. The utilization of the principles

would allow for the maintenance of a health promotion perspective throughout the program and would bring to the forefront a continual focus on the broad-based health promotion perspective.

The determination of the practical components within the phases provided invaluable information that added to the operationalization of the principles within a program design. It is crucial to carefully consider the priorities of the program designers, stakeholders, and target group when determining the implementation stages of the program. One implication of the conclusions within this study is that the health promotion principles should be formally addressed in order to maintain the health promotion perspective. This would allow for the achievement of a successful heart health promotion program that addresses the issue of CVD and thus, enhances heart health.

Recommendations

The recommendations for follow-up from this thesis are twofold. First, it would be valuable to further the development of the health promotion principles and to ascertain their integration and placement into program design. A second recommendation would be to test the application and effectiveness of the identified principles within the design and operation of a heart health promotion program. What is critically required is the actual operationalization of the principles in order to ascertain the value of their inclusion in program design.

References

Airhihenbuwa, C. (1994). Health promotion and the discourse on culture: Implications for empowerment. *Health Education Quarterly*, 21(3), 345-353.

Altman, D.G. (1986). A framework for evaluating community-based heart disease prevention programs. *Social Science and Medicine*, 4, 479-487.

Badgley, R.F. (1994) Health Promotion and Social Change in the Health of Canadians. In A. Pederson, M. O'Neill, and I.Rootman, *Health Promotion in Canada: Provincial, National, and International Perspectives* (p.20-39). W.B Saunders Canada.

Bracht, N. (1999). *Health promotion at the community level.* Sage Publications, Thousand Oaks, California.

Brown, E.R. (1991). Community action for health promotion: A strategy to empower individuals and communities. *International Journal of Health Services*, 21(3), p. 441-456.

Canadian Public Health Association (1996). Action statement for health promotion in Canada. Ontario: Ottawa.

Carleton, R.A., Lasater, T.M., Assaf, A.R., Feldman, H.A., & McKinlay, S. (1995). The Pawtucket Heart Health Program: Community changes in cardiovascular risk factors and projected disease risk. *American Journal of Public Health*, 85(6), 777-785.

City of Toronto (1993) Making communities: Concepts and definitions of community development (draft paper). Toronto, Department of Public health.

Cunningham, R. (1992) Promoting better health in Canada and the USA: A political perspective. Centre for Health Promotion: University of Toronto. -

Elder, J.P., Schmid, T.L., Dower, P., & Hedlund, S. (1993). Community heart health programs: Components, Rationale, and strategies for effective interventions. *Journal of Public Health Policy*, 22(5), 463-479.

Elder, J.P., Hovell, M.F., Lasater, T.M., Wells, B.L. & Carleton, R.A. (1985). Applications of behavior modification to community health education: the case of heart disease prevention. *Health Education Quarterly*, 12(2), 151-168.

Elder, J.P., McGraw, S.A., Abrams, D.B., Ferreira, A., Lasater, T.M., Longpre, H., Peterson, G.S., Schwerteger, R., & Carleton, R.A. (1986). Organizational and community approaches to community-wide prevention of heart disease: The first two years of the Pawtucket Heart Health Program. *Health Education Quarterly*, 22(4), 107-117.

Elder, J.P., Schmid, T.L., Dower, P., & Hedlund, S. (1993). Community heart health programs: Components, Rationale, and strategies for effective interventions. *Journal of Public Health Policy*, 22(5), 463-479.

Epp, Jake. (1986). Achieving Health for All: A framework for health promotion. Ontario: Ottawa.

Farquhar, J.W, (1978). The community-based model of lifestyle intervention trials. *American Journal*, 108(2), 103-111.

Federal/Provincial/Territorial Advisory Committee on Population Health (1994). Paper on Population Health. Ottawa.

Fincham, J.W. (1992). Community health promotion programs. *Social Sciences and Medicine*, 35(3), 239-249.

Green, L.W. & Raeburn, J. (1988). Contemporary Developments in Health Promotion: Definitions and Challenges. *Health Promotion: An International Journal*, 29-43.

Glanz, K., Lewis, F.M. & Rimer, B.K. (1997). *Health behavior and health education*. San Francisco: Jossey-Bass.

Hamilton, N. & Bhatti, T. (1996). *Paper on Population Health Promotion: An Integrated Model of Population Health and Health Promotion.* Ottawa.

Hancock, L., Sanson-Fischer, R.W., Redman, S., Burton, R., Butler, J., Girgis, A., et al., (1997). Community action for health promotion: A review of methods and outcomes 1990-1995. *American Journal of Preventive Medicine,* 13, 229-239.

Health and Welfare Canada (1988). Coordinating healthy public policy: An analytical literature review and bibliography. Health Services and Promotion Branch.

Health and Welfare Canada (1989). Knowledge development for health promotion: A call for action. Ottawa.

Heart and Stroke Foundation of Canada. (1995) *Heart disease and stroke in Canada.* Ottawa, Canada.

Higginbotham, N., Heading, G., Pont, J., Plotnikoff, R., Dobson, A.J., Smith, E., Metcalfe, A., Valenti, L., & Croce, N. (1993). Community worry about heart disease: A needs survey in the Coalfields and Newcastle areas of the Hunter region. *Australian Journal of Public Health*, 17 (3), 314-21.

Higginbotham, N., Heading, G., Pont, J., Plotnikoff, R., Dobson, A.J., Smith, E., Metcalfe, A., Valenti, L., & Croce, N. (1993). Community worry about heart disease: A needs survey in the Coalfields and Newcastle areas of the Hunter region. Australian Journal of Public Health, 17 (3), 314-21.

Higginbotham, N., Heading, G., McElduff, P., Dobson, A., & Heller, R. (1999). Reducing coronary heart disease in the Australian Coalfields: Evaluation of a 10-year community intervention. *Social Science and Medicine*, 48 (8), 683-692.

Hyndman, B., Libstug, A., Giesbrecht, N., Hershfield, L., & Rootman, I. (1993). The use of social science theory to develop health promotion programs. Ontarion Ministry of Health: Health Promotion Branch.

International Heart Health Conference. (1995) *The Catalonia Declaration: Investing in Health.* Barcelona, Catalonia.

Labonte, R. (1992). *Issues in health promotion series #3 Health Promotion and Empowerment: Practice Frameworks.* Centre for Health Promotion, University of Toronto.

Labonte, R (1995). Population health and health promotion: What do they have to say to each other? *Canadian Journal of Public Health*, 86(3), 165-168.

LaLonde, M. (1974). A New Perspective on the Health of Canadians. Ottawa: Health and Welfare Canada.

Leeder, S.R. (1995). The contribution of epidemiology to the definition of health goals and targets for Australia. International Journal of Epidemiology, 24 (3) Suppl 1, p.109-110.

Lefebvre, R.C., Lasater, T.M., Carleton, R.A., & Peterson, M.S. (1987). Theory and delivery of health programming in the community: The Pawtucket Heart Health Program. *Preventive Medicine*, 12(1), 80-95.

LoBiondo, G. & Haber, J. (1994). Nursing research: methods, critical appraisal, and utilization. 3rd ed. Mosby, St. Louis

Matarazzo, J.D., Wiess, S.M., Miller, N.E., & Weiss, S.M. (1984). Behavioral health: A handbook of health enhancement and disease prevention. Wiley: New York.

McAlister, A., Puska, P., Salonen, J., Tuomilehto, J., & Koskela, K. (1982). Theory and action for Health Promotion: Illustrations from the North Karelia Project. *American Journal of Public Health*, 72(1), 43-49.

Mittlemark, M.B., Hunt, M.K., Heath, G.W., & Schmid, T.L. (1993). Realistic outcomes: Lessons from community-based research and demonstration programs for the prevention of CVD. *Journal of Public Health Policy,* winter, p. 437-461.

Mustard, J. & Frank, J. (1991). The Determinants of Health. Canadian Institute for Advanced Research, Toronto. On behalf of the CIAR Population Health Program. Nutbeam, D., Wise, M., & Leeder, S.R. (1993). Achieving better health in Australia in the next five years. The Medical Journal of Australia, 159 ( ), 503-504.

Nutbeam, D., Wise, M., & Leeder, S.R. (1993). Achieving better health in Australia in the next five years. The Medical Journal of Australia, 159 ( ), 503-504.

Ottawa Charter for Health Promotion (1986). *An International Conference on Health Promotion.* Ontario: Ottawa.

Paradis, G., O'Loughlin, J., Elliot, M., Masson, P., Renaud, L., Sacks-silver, G., & Lampron, G. (1995). Coeur en sante St-Henri – a heart health promotion programme in a low income, low education neighborhood in Montreal, Canada: Theoretical model and early field experiences. *Journal of Epidemiology*, 49: 503-512.

Proceedings of the 1988 Summer School on Community Health Promotion: Effective Heart Health Programs (1988). Edmonton, McQ Enterprises Ltd.

Puska, P., Nissinen, A., Tuomilehto, J., Salonen, J., Koskela, K., McAlister, A., Kottke, T.E., Maccoby, N., & Farquhar, J.W. (1985). The community based strategy to prevent coronary heart disease: Conclusions from the 10 years of the North Karelia Project. *Annual review of Public Health*, 6, 89-125.

Puska, P., Salonen, J., Tuomilehto, J., Nissinen, A.,& Kottke, T.E. (1983). Evaluating community-based preventive cardiovascular programs: Problems and experiences from the North Karelia Project. *Journal of Community Health*, 9(1), 49-64.

Robertson, A. & Minkler, M. (1994). New health promotion movement: A critical examination. *Health Education Quarterly*, 21(3), 295-312.

Salomaa, V.T., Miettinen, H., Kuulasmaa, K., & Niemela, M. (1996). Decline of coronary heart disease mortality in Finland during 1983-1992: Roles of incidence, recurrence, and case-fatality. *Circulation* 94(12), 3130-3136

Salonen, J.T. (1980). Decline in mortality from coronary heart disease in Finland from 1969-1979. *British Medical Journal*, 264(15), 1857-1860.

Sellers, D.E., Crawford, S. L.. Bullock, K., & McKinlay, J.B. (1997). Understanding the variability in the effectiveness of community heart health programs: A meta-analysis. p.1325-1339.

Shea, S. & Basch, C.E. (1990). A review of five major community-based CVD prevention programs. Part I: Rationale, design, and theoretical framework. *American Journal of Health Promotion*, 4(3), p. 203-213.

Shea, S. & Basch, C.E. (1990). A review of five major community-based CVD prevention programs. Part II: Intervention strategies, evaluation methods, and results. *American Journal of Health Promotion*, 4(4), p. 279-287.

Weisberg, H.F., Krosnick, J.A., & Bowen, B.D. (1996). An introduction to survey research, polling, and analysis. 3rd ed. Sage Publications, Thousand Oaks, California.

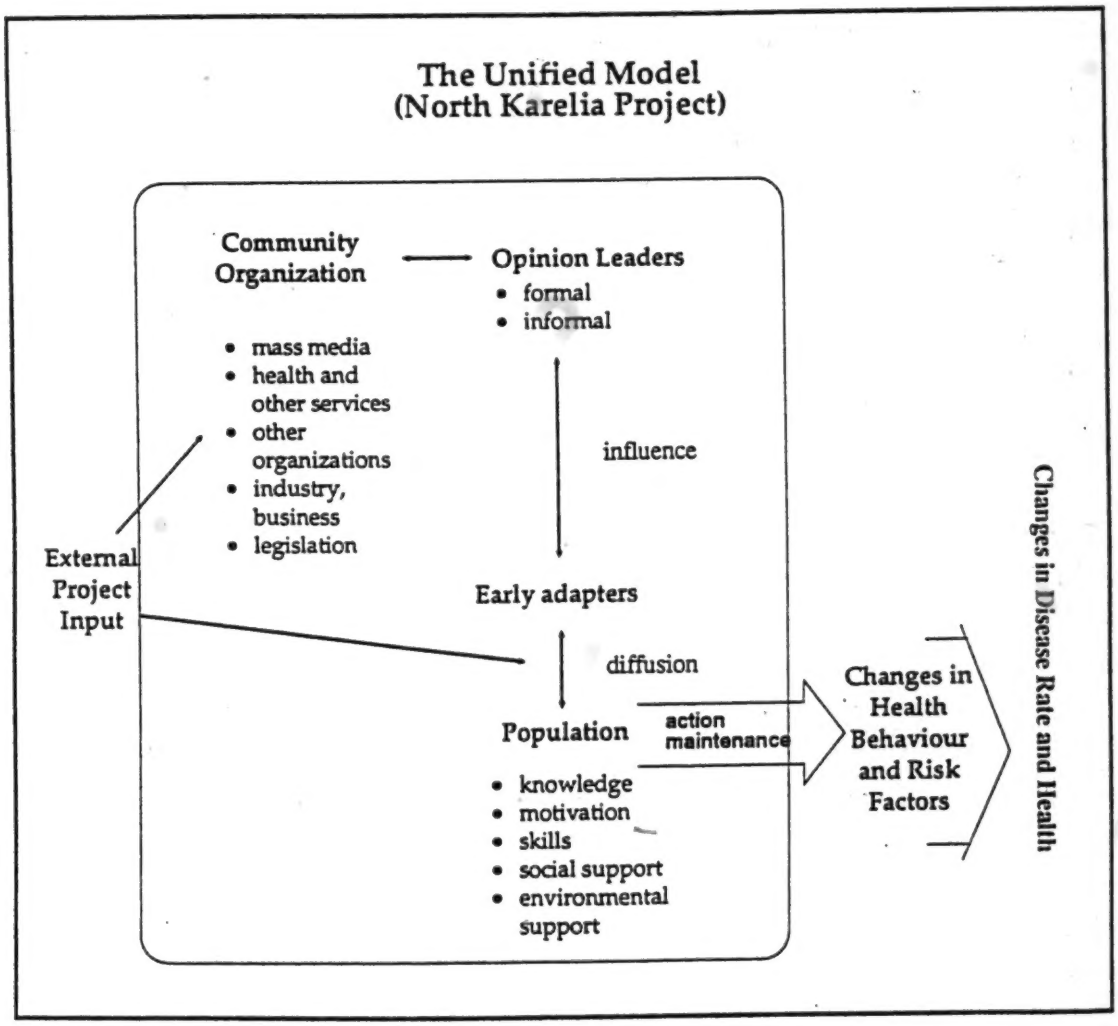
Williams, K. (1992). The community prevention of coronary heart disease. London: HSMO.

Williams, P. & Plotnikoff, R. (1995). The Kurri-Kurri public school healthy heartbeat project. Health promotion journal of Australia, 5(1), 35-39.

Vartiainen, E., Puska, P., Jousilahti, P., Korhonen, H., Tuomilehto, J., & Nissinen, A. (1994). Twenty-year trends in North Karelia and in other areas of Finland. *International Journal of Epidemiology*, 23(15), 495-504.

Appendix A

Unified Model



***Adapted from Hyndman, B., Libstug, A., Giesbrecht, N., Hershfield, L., & Rootman, I. The use of Social Science Theory to Develop Health Promotion Programs (1993). Ontario Ministry of Health: Health Promotion Branch.**

Appendix B

Health Promotion Principles

1. **Health Promotion** recognizes individual, social, and environmental factors interacting to influence health.

2. **Health Promotion** supports a "holistic" approach in which the physical, mental, social, ecological, cultural, and spiritual aspects of health are recognized.

3. **Health Promotion** requires a long-term perspective. Time and support are necessary to create awareness and build understanding of the health determinants within individuals, communities, and organizations.

4. **Health Promotion** necessitates a balance between central and decentralized decision-making on policies that affect people's lives where they reside, in leisure, and work.

5. **Health Promotion** depends on a degree of multi-sectoral involvement including support of the community, organizations, businesses, and policy sectors. It bases its practice in the need to have similar values and vision of a preferred future.

6. **Health Promotion** must draw on knowledge from social, economic, political, medical, and environmental sciences as well as on experiential knowledge.

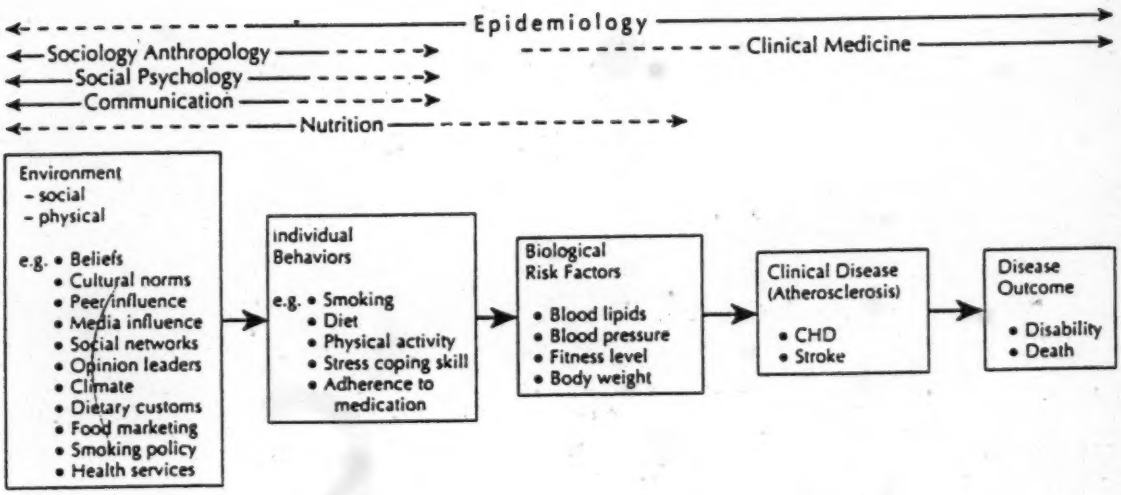
7. **Health Promotion** utilizes the concept of empowerment as an important strategy in achieving long-term changes and sustainability of programs.

8. **Health Promotion** emphasizes public accountability for costs, activities, and effects

9. **Health Promotion** advocates healthy public policy.

Appendix C

Sequence of Factors Leading to CVD



Note: The major disciplines needed for effective community-based research in cardiovascular disease (CVD) are listed above. The traditional scope of each discipline is given in the *solid portion* of the line. The *dotted portion* of the line depicts the less common extension of the particular discipline to broader aspects of the related components.

*** * Adapted from Puska, P., Nissinen, A., Tuomilehto, J., Salonen, J.T., Koskela, K., McAlister, A., Kottke, T.E., Maccoby, N., & Farquhar, J.W. (1985). The community-based strategy to prevent coronary heart disease: Conclusions from the 10 years of the North Karelia project. *Annual Review of Public Health*, vol. 6, 89-125.**

Appendix D

Heart Health Promotion Program

Dear (*Insert name here*),

Thank-you for agreeing to participate in this study. I believe that many insights into the concepts of ***health promotion*** and ***heart health*** can be gained from the perception of those working directly in these fields.

The background to the topic I have chosen as my area of study lies in my profound interest in promoting the health of people. I chose heart health because of the potential of this field to influence a vast number of individuals in numerous aspects with the underlying goal of enhancing people's health and well-being. As well, I have found health promotion to be one of the most promising strategies available to us in our quest to achieve this goal.

I have phrased my research question as follows:

What are the necessary health promotion principles of a successful community-based heart health promotion program which, if applied, could begin to affect changes in a community so as to decrease cardiovascular disease in Canada?

To start, I explicitly delineated the health promotion principles through an examination of the Ottawa Charter (1986), the Framework (1986), and the Action Statement for Health (1996).

Subsequently, I analyzed three past successful heart health programs (North Karelia in Finland, Pawtucket in the USA, and Coalfields in Australia). This analysis led to a description of each program. Their achievements and challenges were outlined within the health promotion principles. From here, a health promotion model was

developed. This model has four phases: assessment, planning, implementation, and evaluation. Each phase has within it a specific emphasis on the applicable health promotion principles which were derived from the prior analysis. The amalgamation of the four phases within the principles has produced a model which I hope will be of value to planners of heart health programs in the future.

This questionnaire will help me to clarify any ambiguities in the wording of the principles as well as obtain your perspective of the organization of the principles within a program development scheme (assessment, planning, implementation, and evaluation). I have included an executive summary of the description of the health promotion principles. I will contact you in a 3 to 5 days and this will provide you with the opportunity to expand on your comments.

If you have any further questions or concerns, I can be reached at 434-1643. Please accept my utmost appreciation for your interest and participation.

Sincerely,

Jennifer Halenar
Candidate for MSc
Centre for Health Promotion Studies

Appendix E

EXECUTIVE SUMMARY

PROGRAM PHASES

1. ASSESSMENT

   This phase sets the stage for program planning. It consists of collecting information, identifying the target group, and learning about the "community".

2. PLANNING

   This phase identifies specific goals and objectives based on the information collected in the assessment phase. From here, the strategy and organization of interventions are planned for implementation in the next phase.

3. IMPLEMENTATION

   The previously planned interventions are enacted within their respective target population.

4. EVALUATION

   This phase entails a *process* and *outcome* focus. The process evaluation is done at various intervals of the implementation phase to ensure appropriateness and determine, to a degree, intervention effectiveness. The outcome evaluation is done at program completion to measure the level of achievement of goals and objectives.

PRINCIPLES OF HEALTH PROMOTION

1. HEALTH PROMOTION recognizes individual, social, and environmental factors interacting to influence health.

- Three mechanisms intrinsic to health promotion (The Framework, 1986):
  - ***self-care*** - decisions and practices taken for the preservation and improvement of health.
  - ***mutual aid*** - the actions people take to help each other cope
  - ***creating healthy environments*** - to shape the conditions conducive to health.
- Based on other health promotion documents (i.e. LaLonde Report, 1974, Ottawa Charter, 1986, and Action Statement for Health, 1996), the intertwining of these elements must be utilized as an integral part of the heart health promotion program.
- It must be acknowledged that CVD risk factors are determined by a combination of interpersonal and external environmental forces, continually interacting.

2. HEALTH PROMOTION supports a "holistic" approach in which the physical, mental, social, ecological, cultural, and spiritual aspects of health are recognized.

- HEALTH can be defined as a state of complete physical, mental, and social wellbeing (WHO, 1986).
- The determinants of health have been outlined: education, social support networks, income, employment and working conditions, physical environment, biology, personal health practices and coping skills, healthy child development, and health services.
- HEALTH PROMOTION is the process of enabling people to increase control over, and improve their health.

3. HEALTH PROMOTION requires a long-term perspective. Time and support are necessary to create awareness and build understanding of the health determinants within individuals, communities, and organizations.

- Community development entails working the expanded definition of health and health determinants into individuals, the community, organizations, institutions, and political arena to foster the awareness about the determinants of health.
- This promotes the acquisition of skills locally and the use of local resources which foster the long-term maintenance of health promotion programs (Paradis et al., 1995).

4. **HEALTH PROMOTION necessitates a balance between central and decentralized decision-making on policies that affect people's lives where they reside, in leisure, and work.**

- This principle is firmly grounded within the perspective that there should be a strong emphasis on community benefits and public participation in problem posing and policy decision-making.

- It particularly focuses on using the expertise and resources available from professionals, but also involves people at the community level in a fuller and more participatory manner (Bracht, 1992).

5. **HEALTH PROMOTION depends on a degree of multi-sectoral involvement including support of the community, organizations, businesses, and policy sectors. It bases its practice in the need to have similar values and vision of a preferred future.**

- Health becomes the concern not only of the individual, but also becomes the responsibiiity of the community sectors of which they are a part.

- Inter-sectoral cooperation - all players take a leadership or partnership role in the particular actions that best fit with their mandate, interest, ability, obligations, and sphere of influence (Canadian Public Health Association, 1996).

6. **HEALTH PROMOTION must draw on knowledge from social, economic, political, medical, and environmental sciences as well as on experiential knowledge.**

- Professionals and academics in various disciplines, are called upon to build bridges both within their own community and outwards towards the private, public, and voluntary sectors.

- Health promotion advocates the combination of educational, organizational, economic, and environmental support for actions conducive to health (Bracht, 1992).

7. **HEALTH PROMOTION utilizes the concept of empowerment as an important strategy in achieving long-term changes and sustainability of programs.**

- Empowerment in health promotion is often defined as a process of helping people assert control over the factors which affect their health and to enhance people's belief in their ability to change their own lives. (Airhihenbuwa, 1994).
- Health professionals and experts take the role of an enabler in the process rather than the leader by assisting individuals and communities to articulate their health problems and identify the solutions.
- This can be actively achieved through the participation in alliances.

8. **HEALTH PROMOTION emphasizes public accountability for costs, activities, and effects**

- In times of fiscal constraints, the effectiveness of health initiatives must be proven to ascertain scarce resources and continued funding.
- The importance of developing comprehensive evaluation methods (using various variables) is emphasized as an integral component of health promotion program planning.

9. **HEALTH PROMOTION advocates healthy public policy.**

- The rationale behind the strategy of coordinating healthy public policy is the belief that public policies in general, act as incentives or disincentives to health (Health and Welfare Canada, 1988).
- Healthy public policy is distinguished from traditional medical care policy by being ecological in perspective, multi-sectoral in scope, and participatory in strategy (Health and Welfare Canada, 1988).
- To develop policy, widespread public awareness and consultation are necessary. At the heart of this process is the empowerment of the community, their ownership and control of their own endeavors and destinies (Bracht, 1992).

Appendix F

QUESTIONNAIRE

Based on your experience with community-based heart health promotion program development, please comment on the following statements.

A. From your experience with heart health promotion programs, please list the important and necessary components of a community-based heart health promotion program in terms of the assessment, planning, implementation, and evaluation phases (See executive summary for a brief description of the phases). This may include such concepts as needs assessment, theoretical basis, various strategies, funding, organization, etc.

In the ***assessment*** phase _____

In the ***planning*** phase _____

In the ***implementation*** phase _____

In the ***evaluation*** phase _____

B. Please rank the following principles according to your perspective of their importance in the creation of community-based heart health promotion programs. See the executive summary for a brief description of these principles. Rank each one individually and use #1 as indicating the most important. Tied ranks are acceptable, but if you could rank these principles from 1-9 it would be most helpful.

❑ HEALTH PROMOTION recognizes individual, social, and environmental factors interacting to influence health.

❑ HEALTH PROMOTION supports a "holistic" approach in which the physical, mental, social, ecological, cultural, and spiritual aspects of health are recognized.

❑ HEALTH PROMOTION requires a long-term perspective. Time and support are necessary to create awareness and build understanding of the health determinants within individuals, communities, and organizations.

❑ HEALTH PROMOTION necessitates a balance between central and decentralized decision-making on policies that affect people's lives where they reside, in leisure, and work.

❑ HEALTH PROMOTION depends on a degree of multi-sectoral involvement including support of the community, organizations, businesses, and policy sectors. It bases its practice in the need to have similar values and vision of a preferred future.

❑ HEALTH PROMOTION must draw on knowledge from social, economic, political, medical, and environmental sciences as well as on experiential knowledge.

❑ HEALTH PROMOTION utilizes the concept of empowerment as an important strategy in achieving long-term changes and sustainability of programs.

❑ HEALTH PROMOTION emphasizes public accountability for costs, activities, and effects

❑ HEALTH PROMOTION advocates healthy public policy.

C. Based on your experience in the area of heart health projects/programs, please answer the following questions.

1. HEALTH PROMOTION recognizes individual, social, and environmental factors interacting to influence health.

a) Do you feel this principle is accurately stated? Yes No

b) If not, what needs to be modified? _____

_____

_____

_____

_____

c) To your knowledge, to what extent* has this principle been incorporated into heart health promotion programs/projects with which you are familiar?

_____

_____

_____

_____

d) How might this principle usefully be incorporated into the development of heart health programs in the future?

_____

_____

_____

_____

* ***"EXTENT"*** is used here to mean to what degree or how completely the principle was applied.

2. HEALTH PROMOTION supports a "holistic" approach in which the physical, mental, social, ecological, cultural, and spiritual aspects of health are recognized.

a) Do you feel this principle is accurately stated? Yes No

b) If not, what needs to be modified? _____

_____

_____

_____

_____

c) To your knowledge, to what extent* has this principle been incorporated into heart health promotion programs/projects with which you are familiar?

_____

_____

_____

_____

d) How might this principle usefully be incorporated into the development of heart health programs in the future?

_____

_____

_____

_____

* ***"EXTENT"*** is used here to mean to what degree or how completely the principle was applied.

3. HEALTH PROMOTION requires a long-term perspective. Time and support are necessary to create awareness and build understanding of the health determinants within individuals, communities, and organizations.

a) Do you feel this principle is accurately stated? Yes No

b) If not, what needs to be modified? _____

_____

_____

_____

_____

c) To your knowledge, to what extent* has this principle been incorporated into heart health promotion programs/projects with which you are familiar?

_____

_____

_____

_____

d) How might this principle usefully be incorporated into the development of heart health programs in the future?

_____

_____

_____

_____

* ***"EXTENT"*** is used here to mean to what degree or how completely the principle was applied.

4. HEALTH PROMOTION necessitates a balance between central and decentralized decision-making on policies that affect people's lives where they reside, in leisure, and work..

a) Do you feel this principle is accurately stated? Yes No

b) If not, what needs to be modified? _____

_____

_____

_____

_____

c) To your knowledge, to what extent* has this principle been incorporated into heart health promotion programs/projects with which you are familiar?

_____

_____

_____

_____

d) How might this principle usefully be incorporated into the development of heart health programs in the future?

_____

_____

_____

_____

* ***"EXTENT"*** is used here to mean to what degree or how completely the principle was applied.

5. HEALTH PROMOTION necessitates a balance between central and decentralized decision-making on policies that affect people's lives where they reside, in leisure, and work.

a) Do you feel this principle is accurately stated? Yes No

b) If not, what needs to be modified? _____

_____

_____

_____

_____

c) To your knowledge, to what extent* has this principle been incorporated into heart health promotion programs/projects with which you are familiar?

_____

_____

_____

_____

d) How might this principle usefully be incorporated into the development of heart health programs in the future?

_____

_____

_____

_____

* ***"EXTENT"*** is used here to mean to what degree or how completely the principle was applied.

6. HEALTH PROMOTION must draw on knowledge from social, economic, political, medical, and environmental sciences as well as on experiential knowledge.

a) Do you feel this principle is accurately stated? Yes No

b) If not, what needs to be modified? _____

_____

_____

_____

_____

c) To your knowledge, to what extent* has this principle been incorporated into heart health promotion programs/projects with which you are familiar?

_____

_____

_____

_____

d) How might this principle usefully be incorporated into the development of heart health programs in the future?

_____

_____

_____

_____

* ***"EXTENT"*** is used here to mean to what degree or how completely the principle was applied.

7. HEALTH PROMOTION utilizes the concept of empowerment as an important strategy in achieving long-term changes and sustainability of programs.

a) Do you feel this principle is accurately stated? Yes No

b) If not, what needs to be modified? _____

_____

_____

_____

_____

c) To your knowledge, to what extent* has this principle been incorporated into heart health promotion programs/projects with which you are familiar?

_____

_____

_____

_____

d) How might this principle usefully be incorporated into the development of heart health programs in the future?

_____

_____

_____

_____

* ***"EXTENT"*** is used here to mean to what degree or how completely the principle was applied.

8. HEALTH PROMOTION emphasizes public accountability for costs, activities, and effects.

a) Do you feel this principle is accurately stated? Yes No

b) If not, what needs to be modified? _____

_____

_____

_____

_____

c) To your knowledge, to what extent* has this principle been incorporated into heart health promotion programs/projects with which you are familiar?

_____

_____

_____

_____

d) How might this principle usefully be incorporated into the development of heart health programs in the future?

_____

_____

_____

_____

* ***"EXTENT"*** is used here to mean to what degree or how completely the principle was applied.

9. HEALTH PROMOTION advocates healthy public policy.

a) Do you feel this principle is accurately stated? Yes No

b) If not, what needs to be modified? _____

_____

_____

_____

_____

c) To your knowledge, to what extent* has this principle been incorporated into heart health promotion programs/projects with which you are familiar?

_____

_____

_____

_____

d) How might this principle usefully be incorporated into the development of heart health programs in the future?

_____

_____

_____

_____

* ***"EXTENT"*** is used here to mean to what degree or how completely the principle was applied.

D. I realize that you may view all 9 principles as being essential elements of the phases of a community-based heart health promotion program. It would be of greatest value to me if you would identify selected principles which you believe to be the most important in each of the phases.

ASSESMENT _____

_____

_____

_____

_____

PLANNING _____

_____

_____

_____

_____

IMPLEMENTATION _____

_____

_____

_____

_____

EVALUATION _____

_____

_____

_____

_____

_____

E. Are there other principles or concepts which relate directly or indirectly to the development of a successful community-based heart health promotion program that you feel should be included?

Appendix G

List of Pilot Study Participants

- Dr. Rudy Dressendorfer
- Phyllis Hodges
- Dr. Ron Plotnikoff
- Dr. Kim Raine-Travers
- Dr. Art Quinney
- Dr. Ron Dyck.

Appendix H

List of Expert Respondents

- Dr. Catherine Donovan – Medical Officer of Health, Newfoundland
- Ms. Rosemary White – Department of Health and Services, Prince Edward Island
- Dr. David MacLean – Department of Community Health and Epidemiology, Nova Scotia
- Dr. Richard Schabas – Director, Public Health Branch and CEO, Ontario
- Dr. Bruce Reeder – Associate Professor, Department of Community Health and Epidemiology, Saskatchewan
- Dr. Ruth Collins-Nakai – Co-Principal Investigator, AB Heart Health Project, Alberta
- Ms. Lynn Blair – Ministry of Health and Ministry Responsible for Seniors Preventive Health Branch, British Columbia

Appendix I

Comparison of North Karelia, Pawtucket, and Coalfields Principle Use Within Program Phases

	ASSESSMENT	PLANNING	IMPLEMENTATION	EVALUATION
Principle 1	All	All	All	All
Principle 2	CHHB	CHHB	CHHB	All
Principle 3	--	CHHB	All	All
Principle 4	All	All	All	PAW
Principle 5	--	All	All	--
Principle 6	All	All	All	--
Principle 7	NK, CHHB	All	All	All
Principle 8	--	CHHB	PAW, CHHB	All
Principle 9	NK,CHHB	CHHB	CHHB	NK, CHHB

Appendix J

Summary of Results Comparing the Three Past Programs with the Experts' Responses

	ASSESSMENT		PLANNING		IMPLEMENTATION		EVALUATION	
Principle	**Experts**	**Programs**	**Experts**	**Programs**	**Experts**	**Programs**	**Experts**	**Programs**
1	5/7	3/3	2/7	3/3	2/7	3/3	1/7	3/3
2	4/7	CHHB	3/7	CHHB	5/7	CHHB	1/7	3/3
3	0/7	0/3	5/7	CHHB	3/7	3/3	3/7	3/3
4	2/7	3/3	5/7	3/3	4/7	3/3	1/7	Paw
5	4/7	0/3	4/7	3/3	6/7	3/3	3/7	0/3
6	3/7	3/3	5/7	3/3	3/7	3/3	4/7	0/3
7	4/7	NK, CHHB	3/7	3/3	6/7	3/3	1/7	3/3
8	0/7	0/3	3/7	CHHB	2/7	PAW, CHHB	7/7	3/3
9	2/7	NK, CHHB	5/7	CHHB	5/7	CHHB	0/7	NK, CHHB